



KALASALINGAM

ACADEMY OF RESEARCH AND EDUCATION

(DEEMED TO BE UNIVERSITY)



Under sec. 3 of UGC Act 1956. Accredited by NAAC with "A++" Grade

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15
LIFE
ON LAND



PROTECT, RESTORE AND PROMOTE SUSTAINABLE USE OF TERRESTRIAL ECOSYSTEMS, SUSTAINABLY MANAGE FORESTS, COMBAT DESERTIFICATION, AND HALT AND REVERSE LAND DEGRADATION AND HALT BIODIVERSITY LOSS

THE - Impact Rankings 2025

15.2.3 Maintain and extend current ecosystems' biodiversity

Kalasalingam Academy of Research and Education collaborated with Life trust India (NGO) initiated and introduced unique and innovative educational techniques with Tiger as theme. Our students participate in various wildlife conservation education programmes. Our institute jointly worked with Zoo outreach organization ZOO, Coimbatore conducted a "Teachers for Tigers" workshop for our students. This wild life service training program created remarkable impacts to supporting land ecosystem through action.

Zoo Outreach Organisation ZOO
Coimbatore
22 February 2023

Teachers for Tigers Training Workshop
2 - 4 March 2023

To
Dean
Student affairs
Krishnankoil, Tamil Nadu 626126

Dear Sir/Madam,

As you know, Zoo Outreach Organisation based in Coimbatore has its focus on wildlife and Conservation education.

ZOO worked with many organizations in the past 33 years, in addition to various conservation initiatives in India and South Asia, putting on trainers' training workshops introducing unique and innovative educational techniques with Tiger as a theme. Now, ZOO in collaboration with the US Fish and Wildlife Service combine training of rural and locals interested in wildlife/conservation education with advanced training materials for those who are planning to conduct tiger education programmes in the near future. The workshop is named 'Teachers for Tigers'.

"Teachers for Tigers" is the workshop theme: it is focused on tigers – the "world's greatest cat" -- in all aspects from the perspective of the zoo educator. The workshop will be centred around a manual developed by a team of people at WCS assisted by Ulhas Karanth and others who work in tiger territory. The manual is entitled "Teachers for Tigers: An Educator's Tool Kit for Saving the World's Greatest Cat", and of course, all participants will get a copy. The manual and the workshop will help you improve your teaching expertise whether you are teaching about tigers or tiger centipedes!

The training will take place at Srivi Rotary Trust Community hall, Madavar Vilagam, Srivilliputhur on 2 - 4 March 2023 (Thursday - Saturday).

This letter is to request you nominate interested students from PG and UG (Zoology) who can sit with the workshop for all three days without skipping any module and are willing to practice with their audience what they learned during the workshop.

It is essential to the organisers that participants will be dedicated to trying the materials and strategies covered in the workshop in their programmes. We will also ask participants to provide a statement of the workshop's impact on their work, both immediately after the workshop and six months later.

We will sponsor participants' minimum bus travel, lunch and tea during workshop days, registration and tuition. The workshop will last three days and we expect all the participants to attend every session of the workshop.

With our very best wishes,

Yours sincerely,

Dr B.A. Daniel
Scientist / Education Coordinator
ZOO

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Maintain land Management system

The design was that of a Saw-Tooth model of poly house and construed two units of Polyhouses namely Unit I (Natural ventilated type) and Unit II (Hi-Tech type). In Unit I polyhouse was constructed with galvanized steel poles an area of 2112 sq.m, covered with poly sheet and fixed slide door was arranged to enter in polyhouse. Where as in Polyhouse Unit II was construed with galvanized steel poles an area of 1008 sq.m and big six exhaust fans were arranged to send the inside air from polyhouse. The evaporative cooling pads was arranged to cool the inside system of both polyhouses. Finally, the micro irrigation system such as drip irrigation and fogger irrigation system were set in both Unit I and Unit II.



Common name	Wild castor
Botanical name	<i>Baliospermum montanum</i>
Family	Euphorbiaceae
Tamil name	Pey-amanakku - கார்டு ஆமணக்கு
Medicinal uses	The roots are used in dropsy, anascara, and jaundice. Decoction of leaves is used for treating asthma. Seeds are purgative, used externally as stimulant, and are rubifacient. The oil from the seeds is hydrogogue, cathartic, and used for external application in rheumatism.
Alkaloids content	flavonoids (35.63-43.33%), Saponins (9.9 to 13.2%), phenolics (38.43 to 43.44%), tannins (13.26 to 18.3%), terpenoids (25.36 to 33.4%).



Common name	Sessile joyweed / Brazilian spinach
Botanical name	<i>Alternanthera sessilis</i>
Family	<u>Amaranthaceae</u>
Tamil name	Ponnankanni - பொன்னாங்காணி
Medicinal uses	sessilis is recommended as an herbal remedy to treat wounds, flatulence, nausea, vomiting, cough, bronchitis, diarrhea, dysentery and diabetes. Its root can relieve inflamed wounds.
Alkaloids content	Sessilis contains alkaloids, <i>terpenoids, flavonoids, tannins, saponins, polyphenols, cardiac glycosides and quinones.</i>



<i>Common name</i>	<i>African thyme, French thyme, Indian mint</i>
<i>Botanical name</i>	<i>Coleus Amboinicus</i>
<i>Family</i>	<i>Lamiaceae</i>
<i>Tamil name</i>	<i>Karpooravalli - கற்பூரவல்லி</i>
<i>Medicinal uses</i>	This plant ought to be developed in homes where there are kids. It is called as Karpuravalli on the grounds that it conveys the kind of camphor. In Tamil karpuram implies camphor.
<i>Alkaloids content</i>	Amboinicus extract contains flavonoids, terpenes, saponins, polyphenols and alkaloids. carvacrol (28.65%), thymol (21.66%), α -humulene (9.67%)



Common name	Aloe vera
Botanical name	<i>Aloe barbadensis</i>
Family	Liliaceae
Tamil name	Burn Plant – Kattralai - கற்றாழை
Medicinal uses	Aloe vera is a medicinal plant with antioxidant and antibacterial properties. Aloe vera benefits can include reducing dental plaque, accelerating wound healing, preventing wrinkles, and managing blood sugar. Aloe vera, or <i>Aloe barbadensis</i> , is a thick, short-stemmed plant that stores water in its leaves.
Alkaloids content	Alkaloids of Aloe Species. Several alkaloids have been isolated from several Aloe species . N-methyltyramine and O,N-dimethyltyramine have been reported as being the most common Aloe alkaloids, whereas γ -coniceine was only found in a few species. Aloe vera and <i>Aloe ferox</i> contain unique phytoconstituents including <i>anthraquinones, flavonoids, tannins, sterols, alkaloids, and volatile oils.</i>



Common name	Wild sage
Botanical name	<i>Lantana camara</i>
Family	Verbenaceae
Tamil name	Unni chedi - உன்னிச்செடி
Medicinal uses	camara leaves is mostly used in herbal medicine for wound healing, fever treatment, cough treatment, influenza treatment, stomach ache, malaria, etc. [8]. It has also been recorded that can be used for the treatment of cancers, chickenpox, measles rheumatism, and ulcer
Alkaloids content	The plant contained alkaloids, <i>glycosides</i> , <i>steroids</i> , <i>saponins</i> , <i>flavanoids</i> , <i>coumarins</i> , <i>tannins</i> , <i>carbohydrates</i> , <i>hydroxy anthraquinones</i> , <i>anthraquinone</i> .



Common name	Indian long pepper or pippali
Botanical name	<i>Piper longum</i>
Family	Piperaceae
Tamil name	Thippili - திப்பிலி
Medicinal uses	It is most commonly used to treat chronic bronchitis, asthma, constipation, gonorrhoea, paralysis of the tongue, diarrhoea, cholera, chronic malaria, viral hepatitis, respiratory infections, stomachache, bronchitis, diseases of the spleen, cough, and tumors.
Alkaloids content	Fruits contain about 20 % dry matter, volatile oil, resin, alkaloids (4-5% piperine) and a terpenoid substance. Root contains piperlongumine as major alkaloid in addition to piperine.



Common name	Rabbit-ear leaf/ rabbit ears plant or jammy mouth
Botanical name	<i>Stachys byzantina</i>
Family	Lamiaceae
Tamil name	<i>MUYALKATHU ILAI</i> - முயல்காது இலை
Medicinal uses	In traditional medicine, the aerial parts of <i>S. byzantina</i> are used for the treatment of infections, wounds, asthma, dysentery, epilepsy, digestive disorders, common cold, rheumatic disorders, and neuropathy
Alkaloids content	The main components were <i>germacrene D</i> (9.6 %), <i>Menthone</i> (6.9 %), <i>1,8-cineole</i> (14.8 %), <i>α-terpineol</i> (7.8 %), <i>cubenol</i> (9.9 %), <i>α-cadinol</i> (6.8 %) and <i>Linalool</i> .



Common name	Purple fruited pea egg plant - Red Pea Eggplant
Botanical name	<i>Solanum trilobatum</i>
Family	Solanaceae
Tamil name	Thoothuvalai - தூதுவளை
Medicinal uses	Solanum trilobatum is frequently used to treat respiratory issues such as chest congestion, sinusitis, bronchial asthma, and tuberculosis . It provides asthma patients with a new lease on life.
Alkaloids content	The analysis of the crude aqueous and ethanolic extracts showed an alkaloid content of 0.42% and the presence of tannins, saponins, flavonoids, steroids, terpenoids and cardiac glycosides (data not included). The immunomodulatory and anti-inflammatory properties of S.



Common name	Asthma Plant/ Snakeweed.
Botanical name	<i>Euphorbia hirta</i>
Family	Euphorbiaceae
Tamil name	Amman pacharichi - அம்மான் பச்சரிசி
Medicinal uses	India is known worldwide for its Ayurvedic treatment. <i>Euphorbia hirta</i> is often used traditionally for female disorders, respiratory ailments (cough, coryza, bronchitis, and asthma), worm infestations in children, dysentery, jaundice, pimples, gonorrhoea, digestive problems, and tumors.
Alkaloids content	It is reported to contain <i>alkanes, triterpenes, phytosterols, tannins, polyphenols, and flavanoids.</i>



Common name	Indian Copperleaf/
Botanical name	<i>Acalypha indica</i>
Family	<i>Euphorbiaceae</i>
Tamil name	Kuppameni - குப்பைமேனி
Medicinal uses	<i>Acalypha indica</i> has the capability to serve as anthelmintic, anti-inflammation, anti-bacterial, anti-cancer, anti-diabetes, anti-hyperlipidemic, anti-obesity, anti-venom, hepatoprotective, hypoxia, and wound healing medicine.
Alkaloids content	Major chemical constituents obtained from <i>Acalypha indica</i> are <i>alkaloids, catechols, flavonoids, phenolic compounds, saponins, and steroids</i>



Common name	Indian ginseng/ winter cherry
Botanical name	Withania somnifera
Family	Solanaceae
Tamil name	Aswagandha/ அமுக்கிரா
Medicinal uses	Withania somnifera, commonly called ashwagandha, is a winter cherry tropical to the Solanaceae family that is used in treating a wide variety of illnesses including asthma, diabetes, hypertension, stress, arthritic diseases, and cancer.
Alkaloids content	It contains a series of different phytochemicals and has a wide range of biological significance. More than 12 alkaloids , 40 withanolides and several sitoindosides have been isolated and reported from the plant



Common name	Indian Birthwort and Snakeroot
Botanical name	<i>Aristolochia bracteata</i>
Family	Aristolochiaceae
Tamil name	Aadu Thinna Paalai
Medicinal uses	The root is used in skin diseases and heals wounds and destroys the toxic effect of all poisons . In the olden days, it was used against snake-bites in Southern India. The plant possesses emmenagogue, abortifacient, antiarthritic, anti-inflammatory, antiperiodic, diuretic and antibilious properties.
Alkaloids content	Diverse chemical compounds including <i>aristolochic</i> acids, aristolactam, Phenanthrenes, <i>alkaloids</i> , lignans, steroids and terpenes



Common name	Spade Flower
Botanical name	<i>Hybanthus Enneaspermus</i>
Family	Violaceae
Tamil name	Orital tamarai / ஓரிதழ் தாமரை
Medicinal uses	H. enneaspermus is used for the treatment of diarrhoea, urinary infections, leucorrhoea, dysuria, inflammation, cholera and sterility [6]. The whole plant is used as a general tonic for pregnant women. The root infusion is used as a diuretic for gonorrhoea and urinary infections.
Alkaloids content	Plant is reported to possess <i>antidiabetic, antiplasmodial, antimicrobial, anticonvulsant, nephroprotective,</i>



Common name	Chinese chaste tree, five-leaved chaste tree, or horseshoe vitex, or nisinda
Botanical name	<i>Vitex negundo</i>
Family	Lamiaceae
Tamil name	Karunotchi/ கருநாச்சி
Medicinal uses	Leaf smoke is inhaled to get rid of cough; in case of diarrhoea flowers are used; extract of the plant is taken as a diuretic. 'Muscle & joint rub', is a highly effective medicine for backache, muscular sprain and joint pain.
Alkaloids content	Leaves contain Alkaloids such as <i>Nishindine</i> ,. <i>Hydrocotylene</i> , <i>Glyoflavonoids</i> , <i>Orientin</i> , <i>Isorientin</i>



Common name	Crepe Ginger
Botanical name	<i>Costus speciosus</i>
Family	Costaceae
Tamil name	Kostam / வெண்கோஷ்டம் / கோஷ்டம்
Medicinal uses	Kemukha is primarily used by Ayurveda in the treatment of disturbances in lipid metabolism like obesity, hyperlipidaemia . It is also considered useful in the management of diabetes. It is thought to cause contraction in the uterine muscles.
Alkaloids content	Speciosus was done using UV–Visible spectrophotometry which evidently revealed the gratification of the plant with phenolic compounds (25.4 ± 0.4 mg/g of dry material) followed by tannin (20.3 ± 0.62 mg/g of dry material), saponin (18.3 ± 0.66 mg/g of dry material), flavonoid (13 ± 0.79 mg/g of dry material), terpenoid



Common name	butterfly pea/ cordofan pea /Darwin pea
Botanical name	<i>Clitoria Ternatea</i>
Family	<i>Fabaceae</i>
Tamil name	சங்கு கன்னிக்கொடி / Kannikkodi
Medicinal uses	A traditional Ayurvedic medicine, has been used for centuries as a memory enhancer, nootropic, antistress, anxiolytic, antidepressant, anticonvulsant, tranquilizing and sedative agent.
Alkaloids content	It contains many bioactive compounds, such as <i>alkaloids, tannins, glycosides, resins, steroids, saponins, flavonoids, and phenol.</i>



Common name	Holy Basil
Botanical name	<i>Ocimum sanctum</i> / <i>Ocimum tenuiflorum</i>
Family	Lamiaceae
Tamil name	Tulsi /
Medicinal uses	This plant is well known for its medicinal and spiritual properties in Ayurveda which includes aiding cough, asthma, diarrhea, fever, dysentery, arthritis, eye diseases, indigestion, gastric ailments , etc.
Alkaloids content	Consequently the amount of alkaloid and flavonoids ranged from 0.91 to 1.28 and 1.56 to 2.24 percentages respectively. The leaves of <i>Ocimum sanctum</i> contain <i>0.7% volatile oil</i> comprising about 71% eugenol and 20% methyl eugenol.



Common name	Four-angled vine, Veldt Grape/ winged treebine or adamant creeper
Botanical name	<i>Cissus quadrangularis</i>
Family	<i>Vitaceae</i>
Tamil name	பிரண்டை / Pirantai
Medicinal uses	Cissus quadrangularis might have antioxidant, pain-relieving, and anti-inflammatory effects. It <i>might also help stimulate bone growth</i> . Cissus quadrangularis is used for <i>diabetes, obesity, high cholesterol, bone fractures, allergies, cancer, stomach upset, painful menstrual periods, asthma</i> .
Alkaloids content	It is used for diabetes, obesity, high cholesterol, bone fractures, allergies, cancer, stomach upset, painful menstrual periods.



Common name	Australian cowplant / sugar destroyer
Botanical name	<i>Gymnema sylvestre</i>
Family	<i>Apocynaceae</i>
Tamil name	சிறுகுறிஞ்சா / cirukurinca/ கோகிலம் / kokilam
Medicinal uses	It may help you fight sugar cravings and lower high blood sugar levels. The plant may also play a <i>beneficial role in diabetes</i> . gymnema is used <i>for diabetes, metabolic syndrome, weight loss, and cough</i> . It is also used for malaria and as a snake bite antidote, digestive stimulant.
Alkaloids content	The major biologically active plant molecules are gymnemic acids, a class of triterpenoid saponins, which have the effect of suppressing the taste of sweetness on the tongue from sucrose (sugar), stevia, xylitol, and artificial sweeteners such as aspartame.



Common name	heart-leaved moonseed, amrita, gurbel or giloy
Botanical name	<i>Tinospora cordifolia</i>
Family	Menispermaceae
Tamil name	ஆகாசக்கருடன் / Akaca-k-karutan / சீந்தில் - Chintil
Medicinal uses	Tinospora cordifolia has an importance in traditional ayurvedic medicine used for ages in the treatment of fever, jaundice, chronic diarrhea, cancer, dysentery, bone fracture, pain, asthma, skin disease, poisonous insect, snake bite, eye disorders.
Alkaloids content	Major constituent of Tinospora cordifolia: <i>terpenoid, alkaloid, lignans, steroids.</i> content, antipyretic, antileprotic, radioprotective. The plant extract chiefly contains <i>glycosides, steroids, sesquiterpenoids, alkaloids,</i> aliphatic compounds, fatty acids, essential oils, and polysaccharides.



Common name	China rose, Hawaiian hibiscus, rose mallow and shoeblack plant
Botanical name	<i>Hibiscus rosa-sinensis</i>
Family	Malvaceae.
Tamil name	செம்பருத்தி அல்லது செவ்வரத்தை / Rose mallow
Medicinal uses	This plant has various important medicinal uses for treating wounds, inflammation, fever and coughs, diabetes, infections caused by bacteria and fungi, hair loss, and gastric ulcers in several tropical countries.
Alkaloids content	Rosa-sinensis (Yellow) contained 0.678±0.16% phenols, 0.48±0.16% alkaloids and 8.5±0.20% tannins[64]. (FRP) of flowers was 4.0 ± 0.3 mg gallic acid equivalent /100g[65]. contents in methanol extract were 4104.0, 7.6, 361.9 and 50.7 µg/g respectively



Common name	India Abutilon,
Botanical name	<i>Abutilon indicum</i>
Family	Malvaceae
Tamil name	Monkey Bush / துத்திக்கீரை அல்லது வட்டத்துத்தி
Medicinal uses	Atibala is considered balya in Ayurveda, which means that it increases strength, vigor and vitality . It is used in facial paralysis and joint disorders. It is also indicated as a uterine tonic as well as an aphrodisiac.
Alkaloids content	Some important constituents reported in the plant are Beta-sitosterols, vanillic acid, Para-coumaric acid, caffeic acid, fumaric acid, Abutilon-A,(R)-N-(1'-methoxycarbonyl-2'phenylethyl)-4-hydroxybenzamide, Para-hydroxybenzoic, galatonic, Para—Beta-D-glycosyloxybenzoic and amino acids.



Common name	Thumba
Botanical name	<i>Leucas aspera</i>
Family	Lamiaceae.
Tamil name	தும்பை / Thumbai
Medicinal uses	Leucas aspera is reported to have antifungal, prostaglandin inhibitory, antioxidant, antimicrobial, antinociceptive and cytotoxic activities. Leucas aspera is used in the traditional medicine of the Philippines to treat snake bites . It is also an antipyretic, it is a herb that has the ability to help reduce fevers.
Alkaloids content	The major secondary metabolites of these plants are phenolics, alkaloids, glycosides, steroids, lignins, flavonoids, terpenoids, and <i>galactose</i> .



Common name	Pottakanchi
Botanical name	<i>Dipteracanthus prostratus</i>
Family	Acanthaceae
Tamil name	Silanthi nayagam/
Medicinal uses	Bell weed (<i>Dipteracanthus prostratus</i>) is a medicinal herb, traditionally used in the treatment of wounds, anti-cancer, hypoglycemic, anti-inflammatory, anti-ulcer and anti-oxidant activities . Believed to be anticancer against the epidermis of the nasopharynx region and slightly hypoglycemic.
Alkaloids content	The well-recognized groups of secondary metabolites were <i>flavonoids</i> , <i>lignans</i> , <i>coumarins</i> , <i>alkaloids</i> , <i>triterpenes</i> , <i>sterols</i> , <i>phenolic glycosides</i> ,



Common name	Indian sarsaparilla
Botanical name	<i>Hemidesmus indicus</i>
Family	Apocynaceae
Tamil name	Nannari ver /நுன்னாரி வேர்
Medicinal uses	The main pharmacological properties of <i>H. indicus</i> include hepatoprotective, anti-cancer, anti-diabetic, antioxidant, neuroprotective, anti-ophidian, cardioprotective, nephroprotective, anti-ulcerogenic, anti-inflammatory, and antimicrobial properties.
Alkaloids content	The leaves contain <i>tannins, flavonoids, hyperoside, rutin and coumarino</i> Content is available under CC BY-SA 4.0 unless otherwise noted. Alkaloids isolated from <i>T. cordifolia</i> include <i>tinospurin (leaf, stem and roots)</i> , <i>tinosporic acid (leaf, whole plant)</i> , <i>berberine, palmatine, tembatarine</i> .



Common name	Chaff-flower, prickly chaff flower, devil's horsehip
Botanical name	<i>Achyranthes aspera</i>
Family	Amaranthaceae
Tamil name	ஆகாடம் akatam/ அபாமார்க்கம் apamarkkam / நாயுர் இ nay-urii
Medicinal uses	Different parts of the plant are ingredients in many native prescriptions in combination with more active remedies. In Western India the juice is applied to relieve toothache. The ashes with honey are given to relieve cough; the root in dosed of one tola is given at bedtime for night blindness, and rubbed into a paste with water it is used as an anjan (eye salve) in opacities of the cornea. The seeds are often used as a famine food in India, especially in Rajputana, where the plant is called Bharotha (grass).
Alkaloids content	All the extracts of <i>A. aspera</i> root and inflorescences contain <i>alkaloids, tannins, cardiac glycosides, steroids, flavonoids, terpenoids</i> . The samples of <i>Achyranthes aspera</i> were found to contain <i>alkaloids and tannins</i> .



Common name	Madagascar Periwinkle, Cayenne Jasmine, Rose Periwinkle, Periwinkle.
Botanical name	<i>Catharanthus roseus</i>
Family	Apocynaceae
Tamil name	நித்தியகல்யாணி/ Nithya kalyani
Medicinal uses	In Ayurveda the extracts of its roots and shoots, though poisonous, is used against several diseases. In traditional Chinese medicine, extracts from it have been used against numerous diseases, including diabetes, malaria, and Hodgkin's lymphoma. Many of the vinca alkaloids were first isolated from <i>Catharanthus roseus</i> . The substances vinblastine and vincristine extracted from the plant are used in the treatment of leukemia and Hodgkin's lymphoma.
Alkaloids content	Alkaloids produced by <i>Catharanthus roseus</i> (1) vindolicine ($C_{51}H_{64}N_4O_{12}$, 925.08 g/mol); (2) anhydrovinblastine ($C_{46}H_{56}N_4O_8$, 792.97 g/mol); (3) vincristine ($C_{46}H_{56}N_4O_{10}$, 824.95 g/mol); (4) ajmalicine ($C_{21}H_{24}N_2O_3$, 352.43 g/mol); (5) tabersonine ($C_{21}H_{24}N_2O_2$, 336.44 g/mol); (6) catharanthine ($C_{21}H_{24}N_2O_2$, 336.42); (7) ...



Common name	Indian Senna, Alexandrian senna, Tirunelveli Senna, Egyptian Senna,
Botanical name	<i>Cassia angustifolia</i>
Family	Caesalpiaceae
Tamil name	Alakalam, Alakalampokki, Alakalampokkiceti/
Medicinal uses	Senna alexandrina was used in the form of senna pods, or as herbal tea made from the leaves, as a laxative. Modern medicine has used extracts since at least the 1950s as a laxative. If accidentally ingested by infants, it can cause side effects such as severe diaper rash. The active ingredients are several senna glycosides which interact with immune cells in the colon.

Alkaloids content	The presence of secondary metabolites such as <i>tannins</i> , <i>alkaloids</i> , <i>glycosides</i> , <i>terpenoids</i> and phytosterols were determined according to standard methods.
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Common name	Thyme-leaved gratiola, herb of grace, and Indian pennywort.
Botanical name	<i>Bacopa monnieri</i>
Family	Plantaginaceae
Tamil name	Neer brahmi/ நீர்ப்பிரமி
Medicinal uses	Famed in Ayurvedic medicine, brahmi has antioxidant properties. It has been reported to reduce oxidation of fats in the blood stream, which is a risk factor for cardiovascular diseases. It has been used for centuries to help benefit epilepsy, memory capacity, increase concentration, and reduce stress-induced anxiety. It is listed as a nootropic, a drug that enhances

	<p>cognitive ability. According to Ayurveda, it is bitter, pungent, heating, emetic, laxative and useful in bad ulcers, tumours, ascites, enlargement of spleen, indigestion, inflammations, leprosy, anaemia, biliousness etc. According to Unani system of medicine, it is bitter, aphrodisiac, good in scabies, leucoderma, syphilis etc. It is a promising blood purifier and useful in diarrhea and fevers.</p>
Alkaloids contents	<p>Bacosides consists of 12 known analogs (Garai et al., 2009; Chakravarty et al., 2003). The alkaloids present in the plant contain brahmine, nicotine, herpestine, apigenin, hersaponin, D-mannitol, plantainoside B monnierasides I-III, and cucurbitacin</p>



Common name	Indian Mulberry, Noni, Great Morinda, Cheese Fruit, Brimstone Tree
Botanical name	Morinda citrifolia
Family	Rubiaceae
Tamil name	Munja pavattay / Nuna
Medicinal uses	Scientific studies have investigated noni's effect on the growth of cancerous tissue. One such study found that noni inhibited and reduced growth of the capillary vessels sprouting from human breast tumor explants and, at increased concentrations, the noni caused existing vessels in tumors to rapidly degenerate.
Alkaloids contents	It was also containing <i>alkaloids</i> , anthraquinones, antioxidants, essential oils, flavonoids, saponins, scopoletin and sugars. The main <i>alkaloids</i> present in <i>noni</i> are xeronine, scopolenin, dammacanthol



Common name	Crown flower or giant milkweed
Botanical name	<i>Calotropis gigantea</i>
Family	Apocynaceae
Tamil name	Erukku/ எருக்கு

Medicinal uses	The plant is reported as effective in treating skin, digestive, respiratory, circulatory and neurological disorders and was used to treat fevers, elephantiasis, nausea, vomiting, and diarrhea . The milky juice of <i>Calotropis procera</i> was used against arthritis, cancer, and as an antidote for snake bite.
Alkaloids contents	<i>C. gigantea</i> leaf extract consisted of alkaloids (0.90%), tannin (5.94%), phenol (9.88%), flavonoids (2.20%), saponin (4.95%), and terpenoid (positive).



Common name	Gale of the wind, stonebreaker, shatter stone , seed-under-leaf, quebra pedra and chance pierre.
Botanical name	<i>Phyllanthus niruri</i>
Family	Phyllanthaceae
Tamil name	கீழாநெல்லி / keelanelli,
Medicinal uses	Carry Me Seed is an important plant of Indian Ayurvedic system of medicine which is used in the problems of stomach, genitourinary system, liver, kidney and spleen. It is bitter, astringent, stomachic, diuretic, febrifuge and antiseptic. The whole plant is used in gonorrhea, menorrhagia and other genital affections. It is useful in gastropathy, diarrhoea, dysentery, intermittent fevers, ophthalmopathy, scabies, ulcers and wounds.
Alkaloids contents	An initial phytochemical exploration of <i>Phyllanthus</i> species reported the occurrence of terpenoids, <i>alkaloids</i> , <i>glycosides</i> , <i>flavonoids</i> , <i>tannins</i> .



Common name	Candy Leaf, Sugar Leaf, Sweet Herb of Paraguay, Sweet Honey Leaf.
Botanical name	<i>Stevia rebaudiana</i>
Family	Asteraceae
Tamil name	<i>Seeni thulasi</i> / சீனித்துளசி
Medicinal uses	It is probably best known as a source of natural sweeteners. Some people take stevia by mouth for medical purposes such as lowering blood pressure, treating diabetes, heartburn, high uric acid levels in the blood, for weight loss, to stimulate the heart rate, and for water retention.
Alkaloids contents	Our previous study and several other studies on <i>Stevia</i> also showed that the <i>plant</i> leaves contain <i>alkaloids, steroids, tannins, saponins, flavonoids.</i>



Common name	Satawari, buttermilk root, climbing asparagus, water root,
Botanical name	<i>Asparagus racemosus</i>
Family	Asparagaceae
Tamil name	Asparagus / Thaneer vittan kilangu / தண்ணீர்விட்டான்
Medicinal uses	In Ayurvedic medicine, the root of Satavari is used in the form of juice, paste, decoction and powder to treat intrinsic haemorrhage, diarrhoea, piles, hoarseness of voice, cough, arthritis, poisoning, diseases of female genital tract, erysipelas, fever, as aphrodisiac and as rejuvenative.
Alkaloids contents	Steroidal saponins, shatavaroside A, shatavaroside B, filiasparoside C, shatavarins, immunoside, and schidigerasaponin D5 (or asparanin A) were isolated from the roots of <i>Asparagus racemosus</i> . Also known is the

	isoflavone 7-O-β-D-glucopyranoside.	8-methoxy-5,6,4'-trihydroxyisoflavone
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Common name	Golden eye-grass, xian mao, weevil-wort, black musli, Kali musli
Botanical name	<i>Curculigo orchioides</i>
Family	Hypoxidaceae
Tamil name	Nilappannai kilangu / நிலப்பனைக்கிழங்கு
Medicinal uses	The rhizomes of the plants are used for the treatment of decline in strength, jaundice and asthma. According to Ayurveda, root is heating, aphrodisiac, alternative, appetizer, fattening and useful in treatment of piles,

	biliousness, fatigue, blood related disorders etc. According to Unani system of medicine, root is carminative, tonic, aphrodisiac, antipyretic and useful in bronchitis, ophthalmia, indigestion, vomiting, diarrhea, lumbago, gonorrhoea, gleet, hydrophobia, joint pains etc.
Alkaloids contents	Curculigo orchioides rhizome extracts contain an alkaloid lycorine, sterols including sitosterol, sapogenin, and flavone glycoside 5,7-dimethoxy glucopyranoside . Flavonoids include 5,7-dimethoxy glucopyranoside, and fatty acids such as linolenic, palmitic, behenic, arachidic, and oleic acids



Common name	Toothache plant, buzz buttons, tingflowers and electric daisy.
Botanical name	<i>Acmella oleracea</i>
Family	Asteraceae
Tamil name	Palvalipoondu
Medicinal uses	The leaves and flower heads contain analgesic, antifungal, anthelmintic, and antibacterial agents, but some of the compounds are destroyed by desiccation or freezing.
Alkaloids contents	It is worth highlighting the <i>Acmella oleracea</i> macronutrients and micronutrients with the highest content levels such as protein (24.01%), ash (10.92%), total fiber (62.61%), Ca (2551.56 mg 100 g ⁻¹), Mg (734 mg 100 g ⁻¹), and Cu (2.09 mg 100 g ⁻¹), and amino acids such as asparagine (32.01 mg g ⁻¹), glutamic acid (28.26 mg.



Common name	Blond plantain, desert Indianwheat, blond psyllium, and ispaghol
Botanical name	<i>Plantago ovata</i>
Family	<i>Plantaginaceae</i>
Tamil name	Isabgol / இசப்கோல் உமி
Medicinal uses	It is used as a herbal medication in traditional Indian medicine (Ayurveda) with a high content of water-soluble fiber, exerting biologic effectiveness in humans, with relevant pharmacologic and nutritional properties, and can be combined with other medications to treat constipation
Alkaloids contents	Another neutral polysaccharide from <i>Plantago ovata</i> contained T-linked Araf, 1,3-linked Xylp, T-linked Xylp and 1,2,4-linked Xylp residues.



Common name	Turkey Tangle Frogfruit
Botanical name	<i>Phyla nodiflora</i>
Family	Verbenaceae
Tamil name	Poduthalai/Frog Fruit/Phyla Nodiflora Podutalei/ Nelahippali Jalbuti
Medicinal uses	Traditionally, the plant has been used to treat constipation and knee pain . Leaves and immature stalks are used to make infusions that are administered to children with indigestion or women that have recently delivered a baby. A paste produced from the plant is also applied to boils and ulcers.
Alkaloids contents	Nodiflora contains 22 different phytochemicals (including 4-hydroxybenzoic acid, 3-dimethoxybenzoic acid, quercetin, gallic acid,

	benzoic acid, catechin, epicatechin, harpagoside, naringin, vanillic acid, carvacrol, 3-hydroxybenzoic acid, naringenin, 3-hydroxy-4-methoxy benzaldehyde, t-cinnamic acid, p-coumaric acid
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Common name	Soursop, Guanabana, Prickly Custard Apple, Durian Belanda, Graviola, Durian Europa.
Botanical name	Annona muricata
Family	Annonaceae
Tamil name	Mullu Ram Phal / Mul seetha

Medicinal uses	The seeds, fruit, and leaves have been used traditionally for stomach complaints and fever, and as a sedative. Clinical trials are lacking to support these uses. The most widely used preparation in traditional medicine is the decoction of bark, root, seed or leaf and applications are varied. In Indonesia, the Caribbean islands and South Pacific countries, the leaves are used in bath to treat skin ailments, while in Mauritius, New Guinea and Ecuador the application of leaves is local on the pain site.
Alkaloids contents	From leaves, root - and stem - barks of <i>Annona muricata</i> L., seven isoquinoline alkaloids have been isolated: reticuline (main alkaloid), coclaurine, coreximine, atherosperminine, stepharine . Anomurine and anomuricine, two minor alkaloids, are new tetrahydrobenzylisoquinolines, with 5, 6, 7 substituted ring A.



Common name	Rosemary/ Sagargandha
Botanical name	<i>Rosmarinus officinalis</i>
Family	Lamiaceae (Labiatae)
Tamil name	Rosumary (ரோசுமேரி).

Medicinal uses	Rosemary contains the antioxidants carnosic acid and rosmarinic acid, and other bioactive compounds including camphor, caffeic acid, ursolic acid, betulinic acid, rosmaridiphenol, and rosmanol. Some of these may be useful in preventing or treating cancers, strokes, and Alzheimer's Disease.
Alkaloids contents	Two specific genera are highlighted, Rauwolfia and Catharanthus, which contain important medically useful <i>alkaloids</i> like reserpine, ajmaline, The main constituents of the <i>rosemary</i> essential oil are camphor (5.0–21%), 1,8-cineole (15–55%), α -pinene (9.0–26%), borneol (1.5–5.0%)



Common name	Brazil Button Flower, Larkdaisy,
Botanical name	Centratherum Punctatum/ C. muticum, C.intermedium
Family	Asteraceae
Tamil name	<i>Kesavardhini/ கேஸவதீநீ</i>
Medicinal uses	Centratherum punctatum Cass. is an important wild ornamental medicinal plant belonging to Asteraceae family. It has anti-inflammatory, anti-cancerous, anti-hypersensitive, anti-bacterial and anti-fungal properties and is commonly used in hair care preparations.
Alkaloids contents	In the callus, the extract had a total of 57 phytochemicals; among them, <i>the Stigmasterol, Guanosine, and Tri-decanoic acid</i> were the major ones. In the root. Leaf extract of Centratherum punctatum exhibits <i>antimicrobial, antioxidant and anti proliferative</i> properties. The Total Flavonoids (0.97 mg/kg), <i>Total Alkaloids (0.32 mg/kg) and Tannin (0.56 mg/kg)</i> .



Common name	Vetivergrass
Botanical name	Chrysopogon zizanioides
Family	Poaceae (Gramineae)
Tamil name	Vetiver
Medicinal uses	The essential oil obtained from the roots is used medicinally as a carminative, diaphoretic, diuretic, emmenagogue, refrigerant, stomachic, tonic, antispasmodic and sudorific . A stimulant drink is made from fresh rhizomes. The plants are used as an anthelmintic.
Alkaloids contents	It is the major constituent of <i>vetiver</i> (<i>Chrysopogon zizanioides</i>) essential oil, which is used widely in the perfume industry. The quantitative analysis illustrated that the <i>alkaloids, flavonoids</i> , tannin, saponin and phenol. Free radical scavenging activity were analyzed



Common name	Creast or green chiretta,
Botanical name	<i>Andrographis paniculata</i>
Family	Acanthaceae
Tamil name	நிலவேம்பு / nilavempu
Medicinal uses	Since ancient times, Kariyat is used as a wonder drug in traditional Siddha and Ayurvedic systems of medicine as well as in tribal medicine in India and some other countries for multiple clinical applications. The therapeutic value of Kalmegh is due to its mechanism of action which is perhaps by enzyme induction. The plant extract exhibits antityphoid and antifungal activities.

Alkaloids contents	14-Deoxy-11-dehydroandrographolide, Plant., 14-Deoxy-11-oxoandrographolide, 5-Hydroxy-7,8,2',3'-Tetramethoxyflavone, 5-Hydroxy-7,8,2'-Trimethoxyflavone, Tissue Culture. Andrographine, Root. Andrographolide, Plant. Neoandrographolide, Plant. Panicoline, Root.
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Common name	Sensitive Plant, Touch-me-not, Shame Plant, Live-and-die, Humble Plant, Action Plant, Rumput Simalu, Mimosa, Malu-malu.
Botanical name	Mimosa pudica
Family	Fabaceae (Leguminosae)
Tamil name	Touch me not

Medicinal uses	The root is used for dysentary with blood / mucus, piles and urinary calculi. The fresh juice of leaves is given internally to stop bleeding. The paste of the leaves is applied externally on piles, fissures, skin wounds, ulcers, etc.
Alkaloids contents	Mimosa pudica contains the toxic alkaloid mimosine , which has been found to also have antiproliferative and apoptotic effects. The extracts of Mimosa pudica immobilize the filariform larvae of Strongyloides stercoralis in less than one hour.



Common name	Indian snakeroot or sarpagandha
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Botanical name	<i>Rauwolfia serpentina</i>
Family	Apocynaceae
Tamil name	Chevanamalpodu
Medicinal uses	Although this plant was well known in India, westerners paid no attention to it until an Indian physician Rustom Jal Vakil, wrote an article on rauwolfia in 1943. Because of the drug's noted sedative effects, it was used to treat over a million Indians in the 1940s for high blood pressure. After a U.S. physician named Wilkins demonstrated the positive effects of reserpine (1952), the plant made front page news. This drug rapidly replaced electric shock and lobotomy as treatments for certain types of mental illness. Moreover, knowledge about the chemistry of this natural plant stimulated the synthesis of other similar alkaloids that are now used as major tranquilizers.
Alkaloids contents	Rauwolfia contains at least 40 alkaloids, which total some 0.7–2.4% . Other substances present include phytosterols, fatty acids, unsaturated alcohols and sugars. In 1931 Siddiqui and Siddiqui isolated ajmaline (rauwolfine), ajmalinine, ajmalicine, serpentine and serpentinine.



Common name	Vasaka, Adulsa, Malabar nut
Botanical name	<i>Adathoda vasica</i>
Family	Acanthaceae
Tamil name	ஆடாதோடை / Atatotai / Attucam / Cimma-muki
Medicinal uses	Adhatoda is useful for curing coughs, colds and asthma and is easy to administer. It has been used for centuries, and is mentioned in Sanskrit scriptures. The leaves, roots, flowers, and bark of this plant have been used in cough, colds, asthma, liquefy sputum, bronchodilator, bronchial catarrh, bronchitis, and tuberculosis . The parts of the plant are commonly used in the forms of decoction or powder.
Alkaloids contents	The total alkaloid content varied from 0.3 mg/ml to 5.93 mg/ml and that of vasicine content varied from 0.2 mg/ml to 5.64 mg/ml in the juice samples prepared by different methods.



Common name	Henna Tree, Inai, Hinai, Mignonette Tree,
Botanical name	Lawsonia alba / lawsonia inermis
Family	Lythraceae
Tamil name	மருதாணி / Marudaani
Medicinal uses	The stem bark was given in jaundice, spleen enlargement, calculus care, leprosy and stubborn skin diseases . <i>L. inermis</i> was also reported to possess antibacterial, antifungal, antiamoebiasis, astringent, antihemorrhagic, hypotensive and sedative effect in ancient texts
Alkaloids contents	It contained carbohydrates, phenolic, flavonoids, saponins, proteins, alkaloids, terpenoids, quinones, coumarins, xanthonenes, fat, resin and tannins . It also contained 2-hydroxy-1,4-naphthoquinone (lawsone).



Common name	Little Wild Gourd
Botanical name	<i>Momordica cymbalaria</i>
Family	Cucurbitaceae
Tamil name	Athalakkai (Tamil) or Kasarakayee
Medicinal uses	Little Wild Gourd fruits are useful in treating gout, rheumatism and sub-acute cases of the spleen and liver disease. The fruits juice and leaf tea of Little Wild Gourd is employed for diabetes, malaria, colic, sores and wounds, infections, worms and parasites, as an emmenagogue, and for measles, hepatitis, and fevers. Fruit pulp, leaf juice and seeds possess antihelminthic activity.
Alkaloids contents	The phytoconstituents of <i>alkaloids</i> , carbohydrates, <i>flavonoids</i> , sterols, terpenoids, and saponins are present in <i>Momordica cymbalaria</i> . The fruit

	(per 100 g) has an energy value of 60 Kcal and contains approximately 23 mg calcium, 171 mg potassium, 2.4 mg sodium, 119.92 mg magnesium, 5.97 mg
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Common name	Flame lily, climbing lily, creeping lily, glory lily, gloriosa lily, tiger claw, and fire lily.
Botanical name	Gloriosa superba
Family	Liliaceae
Tamil name	செங்காந்தள் Chenkantai, கலப்பை கிழங்கு Kallappai kilangu
Medicinal uses	It has been used in the treatment of gout, infertility, open wounds, snakebite, ulcers, arthritis, cholera, colic, kidney problems, typhus, itching, leprosy, bruises, sprains, hemorrhoids, cancer, impotence, nocturnal

	emission, smallpox, sexually transmitted diseases, and many types of internal parasites.
Alkaloids contents	Seeds and tubers produce bioactive alkaloids in very low concentrations of 0.7–0.9% and 0.15–0.3% , respectively. <i>G. superba</i> varieties with stable tuber or seed yields and improved colchicine and gloriosine contents are still under development



Common name	Cochin grass, East-Indian lemon grass or Malabar grass
Botanical name	<i>Cymbopogon fluxuosus</i>

Family	Poaceae
Tamil name	எலுமிச்சைப் புல் / Elumichchai pul
Medicinal uses	The leaves and stems are used in cooking and for making herbal tea. Medicinal: Many medicinal uses but most know to calm and relieve the cramping and colic associated with digestive problems . In India it has also been used as a topical application to treat fungal infections like ringworm.
Alkaloids contents	The primary compounds identified in C. citratus essential oil include α-citral, β-citral, geraniol, nerol, citronellal, myrcene, terpinolene, geranyl acetate, and terpinol methylheptenone . Terpenes, alcohols, ketones, and certain flavonoids and phenolics have also found in the plant



Common name	Tridax Daisy, Coat Buttons, Mexican Daisy
Botanical name	<i>Tridax procumbens</i>
Family	Asteraceae (Compositae)
Tamil name	வெட்டுக்காயப் புண்டு / vettukkaya-puntu
Medicinal uses	It is used as food and medicine. It is used to treat high blood pressure, bronchial catarrh, malaria, dysentery, diarrhoea, stomach ache, headache and wound healing . It also prevents hair loss and stops hemorrhage from cuts and bruises
Alkaloids contents	It consisted of 77.326% galgravin, 12.221% dehydroabietic acid, 7.837% retusin, 2.612% epieudesmin, 0.003% apigenin-4', 7-dimethyl ether and 0.00002% (9E,12E, 15E)-9,12,15-octadecatrien-1-ol. The leaves had very high alkaloids content (10.191 g/kg) .

QUAILS REARING

Recently Quails rearing is getting popular among farmers and there was a huge demand in the market as well because of its taste and meat quality. There are two species of quail in India; the black-breasted quail found in jungle (*Coturnix Coromandelica*) and the brown-coloured Japanese quail (*Coturnix Coturnix Japonica*) which is bred for meat or the one used for commercial Quail production. Quails rearing have number of advantages compare to chicken rearing. Quails are smaller in size and that can be raised in small space, start with lesser initial investment, feeding cost is low and disease are less in quails, they attain maturity at 45 days. So every two months it gives revenue to the farmers.



QUAILS REARING