Journal of Rare Cardiovascular Diseases
ISSN: 2299-3711 (Print) | e-ISSN: 2300-5505 (Online)
www.jrcd.eu
RESEARCH ARTICLE

Ethno-Medicinal Plants of Gudibande Taluk, Chikkaballapur District, Karnataka, with Special Reference to Skin-Hair and Heart-Related Ailments.

A G Paladhi, M BT[1] and Manjunath[2]

[1]Research Student, Department of Life Sciences, Christ (Deemed To Be University), CHRIST (Deemed To Be University), Central Campus, Hosur Road, Bengaluru - 560029

[2]Department Of Life Sciences, Christ (Deemed To Be University), CHRIST (Deemed To Be University), Central Campus, Hosur Road, Bengaluru - 560029

*Corresponding Author
A G Paladhi, M BT
(Amogha.Paladhi@Res.Cheistuniversity.In)

Article History
Received: 10.09.2025
Revised: 20.09.2025
Accepted: 05.10.2025
Published: 28.10.2025

Abstract: ***Aim***: Ethno-Medicinal Studies Have Been Of Great Importance In Recent Times To Safeguard The Traditional Knowledge Used By The Indigenous People Over Centuries, Which Is Poorly Documented. This Paper Gives An Outline Of The Plants That Are Being Used To Treat Various Ailments Related To Skin, Hair And Heart In Gudibande Taluk, Chikkaballapur District In Karnataka. ***Methodology***: People Have Used Medicinal Plants In The Surrounding Area For Decades To Treat Various Ailments. This Study Mainly Focuses On The Treatment Of Skin, Poultice, And Heart- Related Diseases By Using A Number Of Modes Of Preparation, Viz., Decoction, Grinding Of The Plant Material, Stem Or Leaf Extracts, Direct Application On The Infected Skin And Poultice. ***Results***: The Interview Data Includes Detailed Exploitation Of 33 Different Healers Regarding Their Knowledge With Respect To The Traditionally Used Plants, Revealing The Usage Of 36 Plants Belonging To 27 Families, Out Of Which Ocimum Tenuiflorum L., Plumbago Zeylanica L. And Santalum Album L. Are Used To Treat Both Skin, Poultice And Heart-Related Ailments. ***Interpretation***: The Same Treatment Data Of The Plants Was Validated By The Non-Experimental Methods To Confirm The Efficacy Of The Plants Used By The Healers In The Locality, Which Showed That The Plants Used By The Healers Are Efficient Enough To Treat The Ailments.

Keywords: Ethnobotany, Ethno-Medicine, Heart, Skin, Traditional Healers.

INTRODUCTION

Ethnobotany, A Branch Of Botany, Gives An Idea About The Way Society Is Utilizing The Potential Of Plants To Supplement The Usefulness Of The Plants And Their Byproducts To The Present-Day World. Plants Have Been Used As Medicines By Various Cultures Around The World Since Ancient Times, Given That 8% Of Today's World Population Is Dependent On Conventional Methods As A Primary Need For The Betterment Of Health (Guidelines On Conservation Of Plants, 1993). Recently, The Younger Generation Has Failed To Get Knowledge From The Older Generations About The Ethno-Medicinal Practices In The Study Area (Kargiogluet Al., 2008).

Skin Acts As The First Line Of Defense And Barrier In The Body For Heat, Light, And Various Injuries, Being The Largest Organ, And Skin Immunity Plays A Very Important Role In Avoiding Pathogens Entering The Body. Various Biochemicals Like Flavonoids, Minerals, And Antioxidants Are Crucial For Skin Health In Healing, Cleansing, Hydrating And Better Absorption Of Nutrients (Liu Et Al., 2015; Mandal Et Al., 2020). Cardiovascular Diseases Are The Major Concern In Avoiding Mortality Rate Worldwide, Which Is 1.6 Million Deaths/Annum (Uddin Et Al.,2019). The Main Objective Of This Study Is To Document The Plants That Are Traditionally Being Used To Treat Various Skin, Poultice And Heart-Related Issues And To Provide A Shred Of Scientific Evidence For The Plants Mentioned By The Traditional Healers Who Possess The Knowledge About The Treasure That Plants Hold. Traditional Societies Hold Invaluable Knowledge About Medicinal Plants, Much Of It Passed Down Through Generations. Sadly, These Communities And Their Ways Of Life Are Increasingly Under Threat From Modernization, Land Encroachment, And Cultural Loss. As A Result, The Wisdom They Carry About Nature's Remedies Is At Risk Of Disappearing. At The Same Time, Many Medicinal Plants Themselves Are In Danger. Deforestation, Climate Change, And Industrial Activities Are Destroying The Ecosystems. Over- Harvesting Driven By Growing Demand Has Made The Problem Worse, Pushing Some Species To The Brink Of Extinction (Guidelines On Conservation Of Plants, 1993).

MATERIALS AND METHODS:

This Study Was Conducted In 15 Villages Located In The Chikkaballapur District Of Karnataka, India. The District Comprises 6 Taluks: Gowribidanur, Gudibande, Bagepalli, Chikkaballapur, Shidlaghatta

And Chintamani. Geographically, It Lies Between 13° 40' 16" North Latitude And 13° 42' 15" East Longitude (Figure 1). Chikkaballapur District Consists Of Dry Deciduous And Scrub Types Of Forest With An Average Annual Rainfall Of 621mm, Average Temperature Of Approximately 15.7-36°C (District Environmental Plan). The Majority Of The Land In This Area

Is Covered With Red Soil, Loamy-Textured Soil And Alluvial Soil, Which Shows Good Land Capability (Sandhya Et Al., 2023).

A Total Of 17 Field Tours Were Conducted, Interviewing An Average Of 2 People Multiple Times Per Visit From February 2023 To March 2024. The Presented Data Is Primarily Based On The Free Listing And Semi-Structured Interviews Of The Healers With The Help Of Open Open-Ended Questionnaire Given By FRLHT (The Documentation Of Traditional Health Knowledge In The State Of Tripura, India, 2017) Noted On The Field Notebook As Well. This Is Possible After Subsequent Informal Talks, And Participant Observation For A Building Rapport For Them To Trust That The Information Given By Them Is Solely For Research Purposes And Their Knowledge About Ethno-Medicine Will Be Safe From The Other Healers As They Consider That Healing People Is A Divine Job And The Healing Power Of The Plants Will Be Lost If The Information Is Known To Many. The Present Research Is Conducted After Obtaining Consent From The Healers And The Entire Research Abides By The Ethics Provided By The International Society Of Ethno-Biology (ISE, 2008).

The Interview Was Conducted Considering 26 Women And 7 Men In The Age Group Between 45- 70, Who Were Involved In Asking The Questions In The Questionnaire In The Local Language, Comprising Both Kannada And Telugu, Which Was Then Translated To English. The Questionnaire Consists Of Specific Questions Related To The Plants, The Disease They Are Curing, Mode Of Preparation, Mode Of Storage, Food Restrictions During Medications And Other Restrictions Concerning Age, Pregnant Women, Lactating Women, Etc.

During The Field Walks, The Healers Guided Through The Plants By Giving Them Vernacular Names In Various Locations. The Corresponding Vernacular Names Were Identified With Their Scientific Names With The Help Of "Flora Of The Presidency Of Madras" (Gamble, 1915 - 36), "Karnataka Flora" (Saldanha, 1984; 1996), "The World Flora Online" (Http://Www.Worldfloraonline.Org/), Plantnet (Https://Plantnet.Org/En/) And Plant.Id (Https://Plant.Id). Once The Plants Were Collected, Herbaria Were Prepared And Submitted At Central Ayurveda Research Institute, Central Council For Research In Ayurvedic Sciences, Ministry Of AYUSH, Govt. Of India, Followed By Authentication Of The Plants

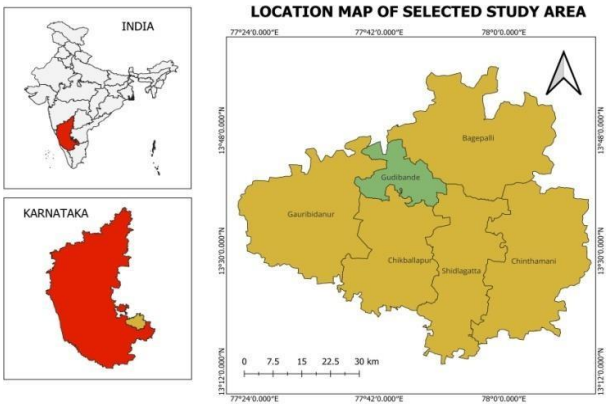

Fig 1: Location Map Of Gudibande Taluk, Chikkaballapur District, Karnataka

Non-Experimental Validation:

Non-Experimental Validation Is A New Methodology Designed To Provide Information And Validation By Reviewing The Previously Conducted Research Regarding The Plant And Its Bioactive Compounds, Which Are Responsible For Treating The Ailments, That Is Usually Obtained After Years Of Research In The Field. Non-Experimental Validation Of Ethno-Medicine Focuses On Understanding And Preserving Traditional Healing Practices Through Respectful Engagement With Indigenous Communities. This Involves Documenting Knowledge From Healers And Elders, Observing Their Methods In Action, And Collecting Testimonials From Patients Who Have Experienced The Effectiveness Of These Treatments. Comparative Studies Across Cultures And Historical Records Can Reveal Consistent Patterns Of Plant Use, Reinforcing Their Credibility. Simple Techniques Like Studying Plant Structures Or Referencing Known Chemical Properties Also Help Confirm The Identity And Potential Benefits Of Medicinal Plants. Additionally, The Frequency And Cultural Importance Of A Plant's Use Can Serve As Powerful Indicators Of Its Value In Traditional Medicine. Gathering Stories, Observing Rituals, And Understanding The Spiritual Or Legal Frameworks Surrounding Certain Practices Provide Deeper Insight Into Their Significance. These Methods Honor The Wisdom Of Traditional Societies While Creating A Bridge To Modern Science, Ensuring That This Invaluable Knowledge Is Not Lost But Preserved And Validated For Future Generations.

RESULTS AND DISCUSSION:

A Total Of 36 Plants Belonging To 27 Families Were Identified, Among Which 27 Plants Are Being Used To Treat Various Skin And Poultice-Related Problems (Table 1), And 11 Plants Are Related To Heart Complications (Table 2). Out Of The 35 Plants, Ocimum Tenuiflorum L.,
Plumbago Zeylanica L. And Santalum Album L. Are Used To Treat Both Skin, Poultice And Heart Related Ailments.

Table 1: List Of Plants Known For Treating Skin, And Poultice Related Problems

Sl. No	Herbarium Accession No.	Scientific Name/ Vernacular Name	Family	Part Used	Type Of Complication
1	RRCBI-Mus594	Acacia Concinna (Willd.) DC /Sigekaayi	Fabaceae	Leaves	To Treat Dandruff, And Shiny Hair And Cool The Body
2	RRCBI-11870	Alangium Salviifolium (L.F.) Wangerin / Ankole	Cornaceae	Seeds	Reduces Itchiness And Increases Glow
3	RRCBI-10932	Albizia Amara (Roxb.) Boivin / Chigaresoppu	Fabaceae	Leaves	To Treat Dandruff, Shiny Poultice And Cool The Body
4	RRCBI-16202	Aloe Vera (L.) Burm.F./ Lole Rasa	Asphodelac Eae	Leaf Juice	Face Glow To Treat Dark Spots And Increase Glow
5	RRCBI-20526	Andrographis Paniculate (Burm.F.) Nees/ Nela Bevu	Acanthacea E	Leaves	Wounds, Ulcer And Itchiness
6	RRCBI-19476	Azadirachta Indica A.Juss. / Bevu	Meliaceae	Young Leaves	Vitiligo
7	RRCBI-19392	Butea Monosperma (Lam.) Taub / Muthukadaele	Fabaceae	Leaves	Reduces Itchiness And Skin Brightening

8	RRCBI-17869	Calotropis Gigantea (L.) W.T.Aiton / Yakka	Apocynace Ae	Leaves	To Protect Skin From Harsh Sunlight, Vitiligo
9	RRCBI-14108	Citrus Limon (L.) Osbeck / Nimbe	Rutaceae	Fruit	Hairfall
10	RRCBI-Mus340	Cymbopogon Citratus (DC.) Stapf / Nimbehullu	Poaceae	Leaves	Soaps And Perfumery
11	RRCBI-19309	Datura Metel L. / Kari Ummathi	Solanaceae	Leaves	Boils, Soreness, Open Wounds And Fish Bites
12	RRCBI-18091	Eclipta Alba (L.) Hassk. / Garagada Soppu	Asteraceae	Leaves	Darkening Of Hair, Hairfall
13	RRCBI-18972	Ficus Benghalensis L. / Aalada Mara	Moraceae	Bark Outgrowth	Severe Boils And Soreness
14	RRCBI-19292	Ficus Religiosa L./ Ashwatha Mara	Moraceae	Bark Outgrowth	Severe Boils
15	RRCBI-19385	Nyctanthes Arbor-Tristis L. / Paarijatha	Oleaceae	Leaves	Hairfall
16	RRCBI-19322	Ocimum Tenuiflorum L. / Tulsi	Lamiaceae	Leaves	Strong Hair Growth, Vitiligo
17	RRCBI-15580	Phyllanthus Amarus Schumach. & Thonn. / Nela Nelli	Phyllanthac Eae	Whole Plant	Various Skin Diseases And Open Wounds

18	RRCBI-20303	Phyllanthus Emblica L. / Usari	Phyllanthac Eae	Leaves	Darkening Of Hair
19	RRCBI-19264	Plumbago Zeylanica L. / Chitramoola	Plumbagen Aceae	Root	Leprosy, Vitiligo, Itchiness And Ringworm Treatment
20	RRCBI-Mus362	Ruta Graveolens L. / Naagadale	Rutaceae	Leaves, Flower	Fungal Infection, Prevents Premature Aging, Complexion, Dermatitis
21	RRCBI-16470	Santalum Album L. / Gandha	Santalaceae	Stem	Face Glow, Sores
22	RRCBI-Mus596	Sapindus Trifolius L. / Antuvaala	Sapindacea E	Seeds	To Treat Dandruff, And Shiny Hair, Cool The Body
24	RRCBI-19224	Sida Cordifolia L. / Mahabala	Malvaceae	Flower	Leprosy, Itchiness, Ringworm Treatment And Dandruff
25	RRCBI-18328	Terminalia Chebula Retz. / Alalekaayi	Combretac Eae	Leaves	Photoprotecti On And Anti- Aging
26	RRCBI-18288	Toddalia Asiatica (L.) Lam. / Kaadu Menasu	Rutaceae	Bark Outgrowth	Treating Hairfall Due To Ticks
27	RRCBI-19267	Tridax Procumbens L. / Nela Shamanthige	Asteraceae	Flower	Open Wounds, Septic Wounds, Worms In Wounds
28	RRCBI-11486	Vetiveria Zizanioides (L.) Nash / Lavancha	Poaceae	Leaves	Face Glow And Refreshes The Mind

Table 2: List Of Plants To Treat Heart-Related Issues

Sl. No	Herbarium Accession No.	Scientific Name/ Vernacular Name	Family	Part Used	Type Of Complication
1	RRCBI-19475	Allium Sativum L./ Bellulli	Amaryllida Ceae	Clove	Low-Density Lipoproteins
2	RRCBI-14735	Commiphora Wightii (Arn.) Bhandari / Guggula	Burseracea E	Gummy Latex	Reduces Cholesterol
3	RRCBI-15562	Ocimum Sanctum L./ Tulsi	Lamiaceae	Leaves	Reduces Low- Density Lipoproteins
4	RRCBI-20223	Piper Betel Blanco / Viledele	Piperaceae	Leaves	Reduces Low- Density Lipoproteins
5	RRCBI-19264	Plumbago Zeylanica L./ Chitramoola	Plumbagen Aceae	Whole Plant	Removes Bad Cholesterol
6	RRCBI-13286	Punica Granatum L./ Daalimbe	Puniaceae	Fruit Peels	Reduces Cholesterol
7	RRCBI-16470	Santalum Album L./ Gandha	Santalaceae	Bark Outgrowth	Enhances High-Density Lipoproteins

8	RRCBI-18918	Terminalia Arjuna (Roxb. Ex DC.) Wight & Arn. / Alalekaayi	Combretac Eae	Bark Outgrowth	Reduces Heartbeat
9	RRCBI-19376	Tinospora Cordifolia (Willd.) Miers/ Amrutha Balli	Menisperm Aceae	Leaves	Reduces Low- Density Lipoproteins
10	RRCBI-18861	Withaniasomn Ifera (L.) Dunal / Ahwagandha	Solanaceae	Root	Reduces Cholesterol
11	RRCBI-Mus205	Zingiber Officinale Roscoe / Shunti	Zingiberace Ae	Tuber	Reduces Low- Density Lipoproteins

Table 3: Non-Experimental Validation For Skin Problems

Scientific Name	Validation	References
Acacia Concinna (Willd.) DC	A. Concinna Powder Is Slightly Acidic With Large Amounts Of Saponins That Help Clean The Scalp Without Harming The Natural Oil On The Scalp. The Ethanolic, Chloroform Extract Via Soxhlet Extraction Showed Better Antifungal Properties Compared To Ketoconazole Thereby Reducing The Dandruff.	(Ediriweera Et Al., 2014)
Alangium Salviifolium (L.F.) Wangerin	Leaves Possess Various Alkaloids Like Alangimarkine, Ankorine, Deoxytobulosinealangiside, Sterols And Three Triterpenoids That Show Antimicrobial Activity. The Decoction Is Used To Treat Boils In Various Cultural Communities.	(Paladhi Et Al.,2024; Shravya Et Al., 2017)
Albizia Amara (Roxb.) Boivin	Budmunchiamines Isolated From Albizia Amara Showed Antimixrobial Activity Against Various Gram Positive And Gram-Negative Bacteria Viz., Staphylococcus Aureus And Salmonella Typhimurium Respectively That Are Known To Show Resistance Against Various Antibiotics.	(Thippeswa My Et Al., 2015)
Aloe Vera (L.) Burm.F.	Anti-Inflammatory And Antioxidant Properties Are Mainly Shown By Emodin, Aloin And Aloesin In A. Barbadensis. IL-8 Production Is Kept In Check, DNA Damage Is Avoided, Production Of ROS Is Reduced, Glutathione Production And Superoxide Dismutase Activity Is Elevated By The Presence Of Aloin.	[3](Sánchez Et Al., 2020)
Andrographis Paniculate (Burm.F.) Nees	A Potent Antioxidant, Antimicrobial Rich In Flavonoids, Andrographolides And Kalmeghin Reduced Inflammation, Upregulation Of Human Collagen I Expression And Angiogenesis	(Al-Bayatyet Al., 2012) (;

	Thereby Increasing Blood Circulation Around The Wounds Proving Oxygen Results In Re-Epithelisation.	Shedoevaet Al., 2019)
Azadirachta Indica A.Juss.	Leaf Extracts Showed 55%-60% Effectiveness Against Malassezia Fungus, Which Is The Major Reason For The Development Of Dandruff.	(Wasiullah Et Al., 2022)
Butea Monosperma (Lam.) Taub	The Extracts Can Be Used To Counteract The Negative Effect Of UV-B Radiation In Keratinocytes Which Protects, And Differentiates The Epidermal Cells Thereby Renewing Them. Antioxidant And Protective Properties Have Also Been Studied In The Flowers On Mast Cells, And Hepatoma Cell Lines. DPPH Scavenging Assay And Anti-Tyrosinase Activity Show That B. Monosperma Is A Potential Skin Lightener.	(Krolikiewi Cz-Renimelet Al., 2013) (; Sungthong & Phadungkit, 2015)
Calotropis Gigantea (L.) W.T.Aiton	The Surface Application Of C. Gigantialatex Extracted Via Petroleum Ether Loaded With Hyalurosomes Showed High Levels Of Penetration And Deposition In The Skin, Thereby Acting As A Treatment For Vitiligo.	(Sahu Et Al., 2022)
Citrus Limon (L.) Osbeck	Ph Of The Scalp Is Maintained Thus Preventing Dandruff And Itchiness As They Are Rich In Vitamin B And C Which Also Help Increase The Shiny Nature Of The Hair By Providing Nourishment To The Hair Follicles Promoting Hair Growth, And Preventing Hairfall. It Is Also Shown To Have An Antibacterial Effect On Staphylococcus Aureus, Which Is One Of The Major Causes Of Dandruff.	(Wasiullahe T Al., 2022) (; Barve Et Al., 2016)
Cymbopogon Citratus (DC.) Stapf	Possess 0.67% Essential Oil, Citral Being The Main Compound And Is The Raw Material For Vitamin A, Said To Have A Lemon-Like Odour According To ISO And ISI, Citronella Gives A Subtle, Long-Lasting Aroma That Is Being Used In High-End Cosmetics. Other Components In The Essential Oil Include Alpha-Pinene, Acetonitrile, Camphor, Etc.	(Onoriode & Ifeanyichuk Wu, 2023) (; Ngan Et Al., 2020)
Datura Mete Ll.	Prasathkumar Et Al Showed That In Vitro Studies Of D. Metel Leaf Extacts Via Methanol Acts As A Promising Anti- Biofilm, Anti-Inflammatory, Anti-Bacterial, Anti-Diabetic And Antioxidant. The Wound Healing Activity Of Methanolic Extract Was Witnessed At 50mg/Ml And The Results Were Proved By The Negative Result Of Cytotoxicity Of Fibroblasts Of L929 Mouse When Treated For 24hrs. Leaf Extracts Can Be Used For Treating Various Metabolic Ailments, Chronic Wounds Due To Diabetes And Superficial Mycoses As Well.	(Prasathku Maret Al., 2022)
Eclipta Alba (L.) Hassk.	The Subcutis Layer Showed The Presence Of Follicles Which Increased In Thickness, The Follicles Also Showed The Transmission Form Telogen Phase To Anagen Phase In Hair Growth Phases When Treated With The Extracts Of E. Alba.	(Datta Et Al., 2009) (; Roy Et Al., 2008)
Ficus Benghalensis L.	F. Beghalensis Is Rich In Quinones, Flavonoids, Polyphenols, Tennainsterpednoids, Alkaloids, Glycosides, Saponins, And Steroids Which Gives Them Effective Antimicrobial, Antidiaarhoel Properties	(Sahoo., 2012)
Ficus Religiosa L.	Latex Is An Aphrodisiac That Is Effective In Treating Boils, Measles And Blisters. Leaves Smeared With Ghee And Warmed Are Used For Treating Mumps And Worms On The Boils.	(Ahmed & Urooj, 2010) (; Rutuja Et Al., 2015)

Nyctanthes Arbor-Tristis L.	Whole Plant Ethanolic Extract Initiates New Hair Growth. It Is Thus Used As An Effective Treatment For Alopecia And Provides An Effective Way Of Developing Healthy Skin And Hair Growth.	(Jain& Pandey 2016) (; Sharma Et Al., 2021)
Ocimum Tenuiflorum L.	Enhance Blood Circulation, And Reduce Itching, Thus Keeping The Scalp Cool As It Contains Tannins, Alkaloids, Saponins, Glycosides, Carvacrol, Caryophyllene, Eugenol And Its Derivatives, And Vitamin C Thereby Preventing Hairfall.	(Sandhu Et Al., 2020)
Phyllanthus Amarus Schumach. & Thonn.	The Growth Of Drug Resistant Gram-Negative Bacteria Was Inhibited Effectively When The Methanolic Extract Of Phyllanthus Amarus Was Induced.	(Mazumder Etal., 2006)
Phyllanthus Emblica L.	Beta-Sitosterol, A Potential 5Alpha-Reductase Inhibitor Present In Considerable Amounts Helps In Treating Androgenic Alopecia. Decreases The Expression Of TGF-Beta1 Resulting In Increased Proliferation Of Keratinocytes Due To The Prolonged Anagen Stage Implying That The Hair Regression Phase Is Delayed In The Rat Model.	(Begum Et Al., 2014)
Plumbago Zeylanica L.	1-Epineo-Isoshinanolone, Plumbagin Act As Effective Anti-Microbial Compounds.	(Kirtikar& Basu, 1934) (; Jetty Et Al., 2010)
Ruta Gravelons L.	Ethanolic Extracts Of R. Gravelonsis Known To Effectively Inhibit The Growth Of Most Of The Gram-Positive Pathogenic Bacteria Viz., S. Pyogenes, S. Aureus, Enterococcus Spp. Making Them An Efficient Antiseptic/ Cleanser. Furanocoumarins Like Psoralen And Its Derivatives, Bergapten, Xanthotoxin, Isopimpinellin Known To Show Photoprotective Reactions, Are Rich In Ruta Making Them An Effective Plant That Can Be Used In Dermatology.	(Shetty Et Al., 2016) (; Milesiet Al., 2001)
Santalum Album L.	Alpha Santasol, One Of The Important Constituents Of S. Album Oil Has Been Known To Act As A Potential Anti- Tyrosinase Compound In-Vitro And To Treat Acne Lesions Resulted Due To The Infection By Staphylococcus And Sores.	(Singh &Nulu., 2010) (; Misra & Dey., 2013)
Sapindus Trifolius L.	The Pericarp Aqueous Extract Showed Pharmacological Activity On The Central Nervous System Showing Neuroleptic Properties Thereby Cooling The Body And Head.	(Arulmozhi Et Al., 2005)
Sida Cordifolia L.	The Endothelial Cells Are Migrated And Proliferated By The Inflammatory Cells For Tissue Repair Which Results In The Production Of Collagen And Keratinocytes In The Extracellular Matrices That End Up In The Re- Epithelialisation Of Injured Tissue. Acetone Extract Of S. Cordifolia Showed The Presence Of High Alkaloid Content Which Is Attributed To Behave As Effective Defense Agents For Insect Herbivores And Microbial Parasites.	(Pawar Et Al., 2013) (; Ahmed Et Al., 2018)
Terminalia Chebula Retz.	Fruit Extract Was Effective In Inhibiting MMP-1, MMP-2 And MMP-13 Thereby Preserving The Cutaneous Collagen; Hence It Is Acting As A Protective Agent Against The Photodamage Of Skin. Cold Aqueous Extract Of Gall Showed 1.37 Times Better Results Than Ascorbic Acid Against Anti-Ageing.	(Yakaewet Al., 2016) (; Manosroiet Al., 2010)

Toddalia Asiatica (L.) Lam.	Rich In Alkaloids And Coumarins Making Them Very Effective Against Parasites.	(Upadhyay. , 2024)
Tridax Procumbens L.	Whole Plant Extract Showed Higher Levels Of Lysyl Oxidase Activity Which Is The Main Reason For The Increase In Crosslinking And Maturation Of Collagen Thereby Increasing The Tensile Strength. The Pro-Healing Activity Is Shown Due To The Presence Of An Adequate Quantity Of Fumaric Acid.	(Udupa Et Al., 1995)
Vetiveria Zizanioides (L.) Nash	V. Zizanoides Is An Effective Plant That Shows Antiproliferative Activity By Inhibiting The Production Of Collagen III. Several Physiological Processes Like Remodelling Of Tissue Are Achieved And Proved By The Study Of Genome-Wide Expression Of Genes.	(Han & Parker, 2017)

Table 4: Non-Experimental Validation For Heart Related Complications

Scientific Name	Validation	Referenc Es
Allium Sativum L.	The Onion Extract Either Preserve Or Upregulate The Activity Of PON1 Thereby Delivering Protection Against Oxidative Damage Induced By Hgcl2, Lipid Peroxidation And LDL Oxidation.	(Jaiswal, & Rizvi., 2014)
Commiphora Wightii (Arn.) Bhandari	Myocardial Antioxidant Status Was Found To Be Improved In The The Myocardium Of Rat By Reversing The Isoprenaline-Induced Oxidative Changes As In Escalation Of CAT, SOD, GSH, Gshpx And Declination Of MDA, CK-MB And LDH Leakage From Heart Was Also Avoided, Inflammation, Edema And Necrosis Was Reduced When Pretreated With C. Wightii, Thereby Making C. Wightii An Effective Therapeutic Agent With Antioxidant And Antiperoxidative Activity Against Ischemic Heart Disease Induced By Oxidative Stress.	(Ojha Et Al., 2011)
Ocimum Tenuiflorum L.	Due To The Presence Of Linolenic Acid, Lipid Peroxidation Is Inhibited Thereby Reducing The Lipid Via Oxidation. Fresh Leaves And Seed Oil When Administered To Albino Rats, The Hypolipidemic Effect Was Shown By Reducing The Levels Of Triglycerides And LDL That Also Showed The Increased Levels Of Sterols And HDL In The Faeces.	(Pattana Yaket Al., 2010; Bano Et Al., 2017)
Piper Betel Blanco.	Ethyl Acetate Extracts Of Piper Betel Showed Radical Scavanging Activity And Antioxidant Defence At Varied Concentrations. A Cardio Protective Agent, Eugenol Was Observed In Ethyl Ecetate Extract At The Concentration Of 43.43 ± 1.46mg/G. H2O2 Induced Oxidative Stress Was Reduced When H9c2 Cells Were Pre-Incubated With 10 Mg/Ml Ethyl Acetate Extracts Showed Improved Cardiac Cellular Defence And Decreased ROS Intercellularly, Reduced Apoptosis Showing Cytoprotectivityof The Extract. Restoration Of Catalase (CAT), Glutathione (GSH), Superoxide Dismutase (SOD), Glutathione Peroxidase (Gpx), Reduction Of CK-MB Isoenzyme Leakage, Lipid Peroxidation Was Observed	(Savsani Et Al., 2020; Arya Et Al., 2010)

	In The Samples Pre-Treated By Piper Betel Extracts. 150-300 Mg/Kg Of Piper Betel Showed Efficiency Against ISP-Induced Myocardial Infraction.	
Plumbago Zeylanica L.	P.Zeylanica Root Ethanolic Root Extract Along With An Antioxidant (Vitamin E) Showed Prominent Reduction In LDL, Triglyceries And Serum Total Cholesterol Levels In Hyperlipidaemic Induced Rabbits.	(Ram., 1996)
Punica Granatum L.	Pretreatment Of P. Granatum Seed Juice Extract And Butanolic Fraction Of P. Granatum Seed Juice Extract In Wistar Rats For 21 Days Restored Heart Rate, ECG And PRI Values Were Bought Back To Normal Range, Vascular Reactivity Was Reduced, CAT And SOD Levels Were Increased Significantly, CK And LDH Levels Were Reduced Showing Major Histopathological And Morphological Changes Thereby Making P. Granatum An Effective Plant Against ISO-Induced Variations In Numerous Biochemical And Cardiac Complications.	(Mohan Et Al., 2010)
Santalum Album L.	Triglycerides, LDL (Low Density Lipoproteins) And Cholesterol Levels Were Found To Be Declined In The Diabetic Rat Models Which Also Showed The Enhancement Of HDL (High Density Lipoproteins).	(Kulkarn I Et Al., 2011)
Terminalia Arjuna (Roxb. Ex DC.) Wight & Arn.	Bark Powder Of T. Arjuna Was Compared With Vitamin E Serum TBARS (Thiobarbituric Acid Reactive Substances) That Acts As Lipid Peroxidation Marker In The Patients Who Have Stable Coronary Heart Disease In Which Only T. Arjuna Extracts Showed Efficient Reduction In TSC (Total Serum Cholesterol) And SLDLP (Serum Low-Density Lipoprotein Cholesterol) And No Substantial Effect On Triglyceride And Serum HDL-C Levels. The Authors Concluded Saying That Flavonoids Present Contributes To The Antioxidant Property And Hypocholesterolemic Property Is Due To The Presence Of Sitostanol And Soluble Fibres.	(Maulik & Talwar., 2012)
Tinospora Cordifolia (Willd.) Miers	Diabetic Rats Were Treated With Aqueous And Ethanolic Extracts Of T. Cordifolia For 10-30 Days Which Showed Reduced Triglycerides LDL Cholesterol, Levels And Increased HDL Cholesterol Levels.	(Puranik N, Et Al., 2008)

Withania Somnifera (L.) Dunal	High Concentration Of Antioxidants And Their Ability To Be Antiapoptotic Which Was Elucidated In The Induce Myocardial Ischemia And Myocardial Injury After Conducting Various Histopathological And Biochemical Studies Viz., Combined Immunohistochemical Localisation Of Bcl And Bax Derivatives And TUNEL Positivity Techniques Which Makes Them A Very Good Cardioprotectant.	(Mohant Y Et Al., 2008)
ZingiberOfficinale Roscoe	The Amount Of Collagen In The Tissues Of Heart, Diabetic Cardiomyopathy Inflammation (Inflammatory Cell Infiltrates), Myocardial Fibrosis Was Found To Be Suggestively Less In The Ginger Extract Treated Rats Compared To The Diabetic Group Due To The Downregulation Of Angiotensin II Type 1 Receptor, TGF- B3 And TGF-B1 Gene Expression In SMAD/TGF-B Pathway.	(Abdi Et Al., 2021)

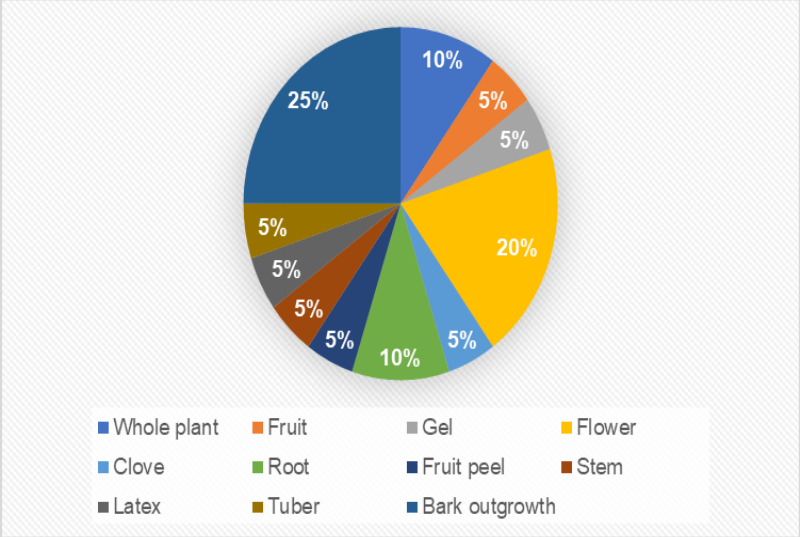

Fig 2: Number Of Plant Parts Used For Ethno-Medicinal Purposes

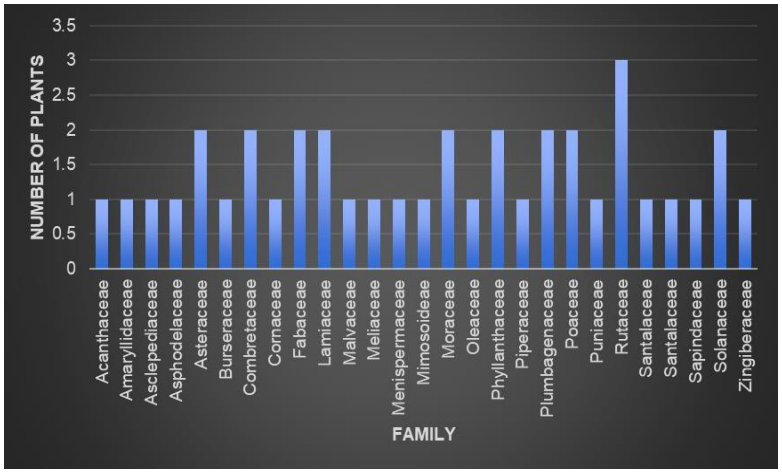

Fig 3: Number Of Plant Species Recorded In Each Family

Conservation Aspects Of Ethnomedicine

The Traditional Healers Tend To Modify Their Ethno-Medicinal Practices In Order To Safeguard The Precious Knowledge As On Others Should Not Be Benefitted In A Commercial Way By Following The Practices. The Older Generations Fail To Pass The Traditional Knowledge Regarding The Medicinal Properties Of The Plants To The Younger Generation And The Patients As They Believe That If It Is Shown The Plant Will Lose Its Healing Properties And Hence The Information Will Be Kept Secret From The Patients And Their Family Members As Well, Because Of

Which The Traditional Ethno-Medicinal Knowledge Is Facing Meaninglessness And Due To Lack Of Understanding Of The Medicinally Important Plants In The Region, The Plants Are Under The Threat Of Extinction, And Losing The Genetic Diversity. But Keeping The Information A Secret Is A Good Way Of Protecting The Plant From Being Overexploited, And Also, If The Healer Dies, The Information Is Lost Regarding The Plant, And We Fail To Understand How Magical Plants Can Be. The Ethno-Medicinal Plant Data Obtained From The Traditional Healers Of Gudibande Taluk Is Individually Screened For Its Bioactive Compounds And The Mechanism Of Action Against The Respective Ailments Treated By The Healers By Reviewing The Vast Data Of Research That Has Been Previously Done Across The World. The Available Bioactive Compound Data For A Particular Plant Is Provided In Table 3 And Table 4, Along With Research Data And Reference To The Same.

CONCLUSION:

The Ethno-Medicinal Information Given By The Healers Contributes To The Future Physiological, Pharmacognosy, And Drug Discovery Research As It Is Like The Tip Of The Iceberg With A Strong Foundation Of Traditional And Experiential Knowledge; The Iceberg Melts, And The Proof Of The Knowledge Will Not Be Seen Even If The Basis Of That Knowledge Is Available Somewhere Deep Down. This Present Study Gives An Outline Of The Plants Used To Treat Various Skin And Poultice- Related Ailments And Heart Complications That Are Traditionally Used By People And Have Shown Good Results In Patients As Well. Despite Modern Medicinal Facilities In The Area That Is Right Next To One Of The Major IT Hubs Of India, People Who Rely On The Plant Community To Treat Various Ailments Are Noteworthy. The Technologies And The Development Help Identify And Isolate Potential Compounds Present In The Plants, As They Possess A Great Treasure Of Compounds That Are Yet To Be Explored And Exploited For A Better Lifestyle. Most Of The Traditional Healing Practices Involve The Usage Of The Extracts Of Plants, Either In The Form Of Decoction Or Paste, As The Entire Plant Extract, Depending On The Process, Makes The Bioactive Compound Bioavailable For Absorption, Which In Turn Provides The Synergetic Effect Of The Various Compounds In Them Nullifying The Negative Effects Of The Other Compounds.

A New Approach, Non-Experimental Validation, Is Designed, Which Provides Cost-Efficiency In Medicinal Plant Research Where Raw Data Is Available, As Provided By The Traditional Healers. The Result Of Such Non-Experimental Research Provides The Validation That Is Required For The Plants That Have Been Used By The Native People For Many Years. The Plants Used By The Healers In Gudibande Taluk Are Worth Checking For Their Efficacy In Identifying The Bioactive Compounds. What Is More, We Lack Detailed Information About Many Of These Plants And Their Uses. Without Urgent Action To Protect Both The Plants And The Traditional Knowledge Tied To Them, We Risk Losing Not Just Individual Species But Entire Systems Of Healing That Have Sustained Communities For Centuries.

Acknowledgement:
The Authors Thank Christ (Deemed To Be University) For Their Support And The Traditional Healers Of Gudibande Taluk For Generously Sharing Their Expertise On Local Medicinal Plants.

Authorship And Contribution:
The Authors Contributed Equally To This Work. This Research Received No External Funding. The Authors Declare No Conflicts Of Interest.

REFERENCES:

1. Abdi, T., Mahmoudabady, M., Marzouni, H. Z., Niazmand, S., & Khazaei, M. Ginger (Zingiber Officinale Roscoe) Extract Protects The Heart Against Inflammation And Fibrosis In Diabetic Rats. Can. J. Diabetes, 45(3), 220-227 (2021). Doi: Https://Doi.Org/10.1016/J.Jcjd.2020.08.102
2. Ahmed, F And Urooj, A: Traditional Uses, Medicinal Properties, And Phytopharmacology Of Ficus Racemosa: A Review. Pharm. Biol., 48(6), 672–681 (2010). Doi: Https://Doi.Org/10.3109/13880200903241861
3. Ahmed, H., Juraimi, A.S., Swamy, M.K., Ahmad-Hamdani, M.S., Omar, D And Rafii, M.Y: Botany, Chemistry, And Pharmaceutical Significance Of Sida Cordifolia: A Traditional Medicinal Plant. In: Springer Ebooks, Akhtar M, Swamy M. Anticancer Plants: Properties And Application, Singapore: Springer., P.517–37 (2018). Doi: Https://Doi.Org/10.1007/978-981-10-8548-2_22
4. Al-Bayaty, F.H., Abdulla, M.A,, Hassan, M.I.A And Ali, H.M: Effect Of Andrographis Paniculataleaf Extract On Wound Healing In Rats. Nat. Prod. Res., 26(5), 423–429 (2012). Doi: Https://Doi.Org/10.1080/14786419.2010.496114
5. Arulmozhi, D. K., Veeranjaneyulu, A., Bodhankar, S. L., & Arora, S. K. Pharmacological Studies Of The Aqueous

Extract Of Sapindustrifoliatus On Central Nervous System: Possible Antimigraine Mechanisms. J. Ethnopharmacol., 97(3), 491-496 (2005).

6. Arya, D. S., Arora, S., Malik, S., Nepal, S., Kumari, S., & Ojha, S. Effect Of Piper Betle On Cardiac Function, Marker Enzymes, And Oxidative Stress In Isoproterenol- Induced Cardiotoxicity In Rats. Toxicol. Mech. Methods, 20(9), 564-571 (2010). Doi: Https://Doi.Org/10.3109/15376516.2010.514962
7. Bano, N., Ahmed, A., Tanveer, M., Khan, G.M And Ansari, M.T: Pharmacological Evaluation Of Ocimum Sanctum. J. Bioequiv. Availab., 9(3), 387-392 (2017). Doi: Https://Doi.Org/10.4172/Jbb.1000330
8. Barve, K And Dighe, A. Hair Shampoo. In: Barve K, Dighe A, Editors. The Chemistry And Applications Of Sustainable Natural Hair Products: Springer. Cham. P. 25-35 (2016).
9. Begum, S., Lee, M.R., Gu, L.J., Hossain, J And Sung, C.K: Exogenous Stimulation With Eclipta Alba Promotes Hair Matrix Keratinocyte Proliferation And Downregulates TGF-B1 Expression In Nude Mice. Int. J. Mol. Med., 35(2), 496–502 (2014). Doi: Https://Doi.Org/10.3892/Ijmm.2014.2022
10. Campus, C. Efficacy Of Tinospora Cordifolia (Willd.) Extracts On Blood Lipid Profile In Streptozotocin Diabetic Rats. Is It Beneficial To The Heart?. Biomed. Res, 19(2), 92-96 (2008).
11. Datta, K., Singh, A.T., Mukherjee, A., Bhat, B., Ramesh, B And Burman, A.C: Eclipta Alba Extract With Potential For Hair Growth Promoting Activity. J. Ethnopharmacol., 124(3), 450–456 (2009). Doi: Https://Doi.Org/10.1016/J.Jep.2009.05.023
12. District Environmental Plan, Chikkaballapur Disrict. Https://Chikkaballapur.Nic.In/En/About-District/District-Environmental-Plan/
13. Ediriweera, S., Perera, A. M. H. Y., Peshala, K. K. V. S., & Perera, K. M. S. P. A Clinical Study On Efficacy Of Siyakkai (Acacia Concinna) Hair Wash On Darunaka (Pitiriasis Capitis). J. Ayurveda. Holist (JAHM)., 2(7), 14-17 (2014).
14. Gamble, J. S. Flora Of The Presidency Of Madras, London: West, Newman And Adlard, 1915-1934, Vols 1-3.
15. Guidelines On The Conservation Of Plants. 1993.
16. Https://Www.Who.Int/Publications/I/Item/2831701368 (Last Accessed: 24th Feb, 2025).
17. Han, X And Parker, T.L: Biological Activity Of Vetiver (Vetiveriazizanioides) Essential Oil In Human Dermal Fibroblasts. Cogent. Med., 4(1), 1298176 (2017). Doi: Https://Doi.Org/10.1080/2331205x.2017.1298176
18. Harma, L., Dhiman, M., Singh, A And Sharma, M.M: Nyctanthes Arbor-Tristis L.: "An Unexplored Plant Of Enormous Possibilities For Economic Revenue". Proc. Natl. Acad. Sci. India. Sect. B. Biol. Sci., 91(2), 241–255 (2021). Doi: Https://Doi.Org/10.1007/S40011-020-01213-Y
19. Jain, P.K And Pandey, A: The Wonder Of Ayurvedic Medicine-Nyctanthesarbortristis. Int. J. Herb. Med., 4(4), 9-17 (2016).
20. Jaiswal, N., & Rizvi, S. I. Onion Extract (Allium Cepa L.), Quercetin And Catechin Up-Regulate Paraoxonase 1 Activity With Concomitant Protection Against Low-Density Lipoprotein Oxidation In Male Wistar Rats Subjected To Oxidative Stress. J. Sci. Food. Agric, 94(13), 2752-2757 (2014). Doi: Https://Doi.Org/10.1002/Jsfa.6620
21. Jetty, A., Subhakar, C., Rajagopal, D., Jetty, M., Subramanyam, M And Murthy, M.M: Antimicrobial Activities Of Neo- And 1-Epineo-Isoshinanolones From Plumbago Zeylanica Roots. Pharm. Biol., 48(9), 1007–1011 (2010). Doi: Https://Doi.Org/10.3109/13880200903433760
22. Kargioğlu, M., Cenkci, S., Serteser, A., Evliyaoğlu, N., Konuk, M., Kök, M. Ş., & Bağci, Y. Research Report: An Ethnobotanical Survey Of Inner-West Anatolia, Turkey. Hum. Ecol, 36(5), 763–777 (2008). Http://Www.Jstor.Org/Stable/40343949
23. Kirtikar, K And Basu, B: Indian Medicinal Plants. Vol. 2. Allahabad; 1934. Doi: Http://Asi.Nic.In/Asi_Books/2047.Pdf
24. Krolikiewicz-Renimel, I., Michel, T., Destandau, E., Reddy, M., André, P., Elfakir, C And Pichon, C: Protective Effect Of A Butea Monosperma (Lam.) Taub. Flowers Extract Against Skin Inflammation: Antioxidant, Anti-Inflammatory And Matrix Metalloproteinases Inhibitory Activities. J. Ethnopharmacol., 148(2), 537–543 (2013). Doi: Https://Doi.Org/10.1016/J.Jep.2013.05.001
25. Kulkarni, C.R., Joglekar, M.M., Patil, S.B And Arvindekar, A.U. Antihyperglycemic And Antihyperlipidemic Effect Of Santalum Album In Streptozotocin Induced Diabetic Rats. Pharm. Biol., 50(3), 360–365 (2011). Doi: Https://Doi.Org/10.3109/13880209.2011.6

04677
26. Liu, F-W., Liu, F-C., Wang, Y-R., Tsai, H-I And Yu, H.P: Aloin Protects Skin Fibroblasts From Heat Stress-Induced Oxidative Stress Damage By Regulating The Oxidative Defense System. Plos ONE., 10(12), E0143528 (2015). Doi: Https://Doi.Org/10.1371/Journal.Pone.0143528
27. Mandal, U., Mallick, S. K., & Mahalik, G. Ethnomedicinal Plants Used For The Treatment And Healing Of Skin Diseases In Odisha, India: A Review. Shodh Sanchar Bull, 10, 100-108 (2020).
28. Manosroi, A., Jantrawut, P., Akihisa, T., Manosroi, W And Manosroi. J: In Vitro Anti-Aging Activities Of Terminalia Chebula Gall Extract. Pharm. Biol., 48(4), 469-481 (2010). Doi: Https://Doi.Org/10.3109/13880200903586286
29. Maulik, S. K., & Talwar, K. K. Therapeutic Potential Of Terminalia Arjuna In Cardiovascular Disorders. Am. J. Cardiovasc. Drugs, 12, 157-163 (2012). Doi: Https://Doi.Org/10.2165/11598990-000000000-00000
30. Mazumder, A., Mahato, A And Mazumder, R: Antimicrobial Potentiality Of Phyllanthus Amarus Against Drug Resistant Pathogens. Nat. Prod. Res., 20(4), 323–326 (2006). Doi: Https://Doi.Org/10.1080/14786410600650404
31. Milesi, S., Massot, B., Gontier, E., Bourgaud, F And Guckert, A: Ruta Graveolens L.: A Promising Species For The Production Of Furanocoumarins. Plant. Sci. J., 161(1), 189-199 (2001). Doi: Https://Doi.Org/10.1016/S0168-9452(01)00413-7 Misra, B.B And Dey, S: TLC-Bioautographic Evaluation Of In Vitro Anti-Tyrosinase And Anti-Cholinesterase Potentials Of Sandalwood Oil. Nat. Prod. Commun., 8(2), 253-256 (2013). Doi: 10.1177/1934578X1300800231
32. Mohan, M., Patankar, P., Ghadi, P., & Kasture, S. Cardioprotective Potential Of Punica Granatum Extract In Isoproterenol-Induced Myocardial Infarction In Wistar Rats.
33. J. Pharmacol. Pharmacother, 1(1), 32-37 (2010).
34. Mohanty, I. R., Arya, D. S., & Gupta, S. K. Withaniasomnifera Provides Cardioprotection And Attenuates Ischemia–Reperfusion Induced Apoptosis. Clin. Nutr, 27(4), 635-642 (2008). Doi: Https://Doi.Org/10.1016/J.Clnu.2008.05.006
35. Nahrul, N. H., Rachmayanti, A. S., &Masaenah, E. Antibacterial Activity Test Of Meniran Herb Extract (Phyllanthus Niruri L.) Against Staphylococcus Epidermidis And Klebsiella Pneumoniae . Science Midwifery., 10(5), 3876-3885 (2022). Https://Doi.Org/10.35335/Midwifery.V10i5.927
36. Ngan, T.T.K., Hien, T.T., Danh, P.H., Nhan, L.T.H. And Tien, L.X: Formulation Of The Lemongrass (Cymbopogon Citratus) Essential Oil-Based Eco-Friendly Diffuse Solution. IOP Conf Ser Mater. Sci. Eng., 959(1), 012024 (2020). Doi: Https://Doi.Org/10.1088/1757-899x/959/1/012024
37. Ojha, S., Bhatia, J., Arora, S., Golechha, M., Kumari, S., & Arya, D. S. Cardioprotective Effects Of Commiphoramukul Against Isoprenaline-Induced Cardiotoxicity: A Biochemical And Histopathological Evaluation. J. Environ. Biol, 32(6), 731 (2011).
38. Onoriode, O.S And Ifeanyichukwu, E: A Comprehensive Review On Lemongrass (Cymbogoncitratus) Oil Extraction And Its Application. IJRD., 8(4), 258–273 (2023). Doi: Https://Doi.Org/10.36713/Epra12959
39. Paladhi, A.P., Vinod, N And Tahir, A: Alangium Salvifolium (L.F.) Wangerin: A Treasure To Be Foraged. In: The Handbook Of Medicinal Plants & Sustainable Human Health (Eds.: Shrivastava R)., Nitya Publications, London, Pp. 75-87 (2024).
40. Pattanayak, P., Behera, P., Das, D And Panda, S. Ocimum Sanctum Linn. A Reservoir Plant For Therapeutic Applications: An Overview. Pharmacogn. Rev., 4(7), 95-105 (2010). Doi: Https://Doi.Org/10.4103/0973-7847.65323
41. Pawar, R.S., Chaurasiya, P.K., Rajak, H., Singour, P.K., Toppo, F.A And Jain, A: Wound Healing Activity Of Sida Cordifolia Linn. In Rats. Indian. J. Pharmacol., 45(5), 474-478 (2013). Doi: Https://Doi.Org/10.4103/0253-7613.117759
42. Prasathkumar, M., Anisha, S., Khusro, A., Essa, M. M., Chidambaram, S. B., Qoronfleh, M. W., & Emran, T. B. Anti-Pathogenic, Anti-Diabetic, Anti-Inflammatory, Antioxidant, And Wound Healing Efficacy Of Datura Metel L. Leaves. Arab. J. Chem, 15(9), 104112 (2022).
43. Puranik, N., Kammar, K.F., Devi, S. Efficacy Of Tinospora Cordifolia (Willd.) Extracts On Blood Lipid Profile In Streptozotocin Diabetic Rats. Is It Beneficial To The Heart?.Biomed. Res; 19(2):92-96 (2008).
44. Ram, A. Effect Of Plumbago Zeylanica In

Hyperlipidaemic Rabbits And Its Modification By Vitamin E. Indian J Pharmacol. 28(3), 161-166 (1996). Doi: Https://Doi.Org/10.4103/0976-500X.64533

45. Roy, R.K., Thakur, M And Dixit, V.K: Hair Growth Promoting Activity Of Eclipta Alba In Male Albino Rats. Arch. Dermatol. Res., 300(7), 357–364 (2008). Doi: Https://Doi.Org/10.1007/S00403-008-0860-3
46. Rutuja, R.S., Shivsharan, U And Shruti, A.M: Ficus Religiosa (Peepal): A Phytochemical And Pharmacological Review. Int. J. Pharm. Chem. Biol. Sci., 4(3), 360-370 (2015). Doi: Http://Www.Ijpcsonline.Com/Files/03-07-15/12-1011.Pdf Sahoo, R.R; Antioxidant &Antimicrobial Efficacy Of Ficus Religiosa L. &Ficus Benghalensis L. PLANT (2012) (Doctoral Dissertation).
47. Sahu, T., Jain, A.P And Jain, P: Preparation, Characterization And Pharmacological Evaluation Of Topical Hyalurosomes Nanogel Formulation Of Calotropis Gigantea For The Treatment Of Vitiligo. Int. J. Health. Sci., 6(S10), 807–829 (2022). Doi: Https://Sciencescholar.Us/Journal/Index.Php/Ijhs/Article/View/13661
48. Saldanha, C. J. Flora Of Karnataka, Oxford And IBH Publishing Co., New Delhi, 1984, Vol. 1.
49. Saldanha, C. J., Flora Of Karnataka, Oxford And IBH Publishing Co., New Delhi,1996, Vol. 2
50. Sánchez, M., González-Burgos, E., Iglesias, I And Gómez-Serranillos, M.P: Pharmacological Update Properties Of Aloe Vera And Its Major Active Constituents. Molecules., 25(6), 1324 (2020). Doi: Https://Doi.Org/10.3390/Molecules25061324
51. Sandhu, J., Kaur, V And Kaur, K; Role Of Herbal Drugs In Treatment Of Alopecia. Pharmaspire., 12(3), 84-88 (2020).
52. Sandhya, K., Gayathri, B., Papireddy, M., Praveenkumar, R., Vishwanath, N And Swathi, B: Assessing The Nutrient Status And Soil Fertility Using Nutrient Indexed Of Farmer's Fields In Chikkaballapura District, Karnataka. Int. J. Plant. Sci., 35(23), 639–649 (2023). Doi: Https://Doi.Org/10.9734/Ijpss/2023/V35i234283
53. Savsani, H., Srivastava, A., Gupta, S., & Patel, K. Strengthening Antioxidant Defense & Cardio Protection By Piper Betle: An In-Vitro Study. Heliyon, 6(1), E03041 (2020). Doi: Https://Doi.Org/10.1016/J.Heliyon.2019.E03041
54. Shanbhag, T., Amuthan, A., & Shenoy, S. Effect Of Phyllanthus Niruri. Linn On Burn Wound In Rats. Asian Pacific Journal Of Tropical Medicine., 3(2), 105-108 (2010).
55. Shedoeva, A., Leavesley, D., Upton, Z And Fan, C: Wound Healing And The Use Of Medicinal Plants., Ecam, 1–30 (2019). Doi: Https://Doi.Org/10.1155/2019/2684108
56. Shetty, P., Shetty, A And D'Souza, A; Evidence For Efficacy Of Ruta Graveolens: An Herb Of Folklore Fame With Antimicrobial Potential. Int. J. Pharm. Res., 8(4), 65-69 (2016).
57. Shravya, S., Vinod, B.N And Sunil, C: Pharmacological And Phytochemical Studies Of Alangiumsalvifolium Wang. – A Review. B-FOPCU., 55(2), 217–222 (2017). Doi: Https://Doi.Org/10.1016/J.Bfopcu.2017.07.001
58. Singh, C.U And Nulu, J.R; Derivatives Of Sandalwood Oil And Santalols For Treating Cold Sores And Herpes, U.S. Patent No. 7,858,126. Washington, DC: U.S. Patent And Trademark Office, 2007.
59. Sungthong, B And Phadungkit, M: Anti-Tyrosinase And DPPH Radical Scavenging Activities Of Selected Thai Herbal Extracts Traditionally Used As Skin Toner. PHCOG J., 7(2), 097–101 (2015).
60. The Documentation Of Traditional Health Knowledge In The State Of Tripura, India
61. (Sur. &Invt./TR-01/2015). M E D I C I N A L P L A N T S B O A R D O F Tr I P U Ra (M P B T
62.). (2017).
63. Thippeswamy, S., Mohana, D. C., Abhishek, R. U., & Manjunath, K. Evaluation Of Some Pharmacological Activities Of Budmunchiamine-A Isolated From Albizia Amara. Braz. J. Microbiol, 46, 139-143 (2015).
64. Uddin, M. Z., Rifat, A. B., Mitu, F. Y., & Haque, T. Ethnomedicinal Plants For Prevention Of Cardiovascular Diseases In Bangladesh. Bangladesh Journal Of Plant Taxonomy, 26(1), 83 (2019). Doi: Https://Doi.Org/10.3329/Bjpt.V26i1.41920
65. Udupa, A., Kulkarni And Udupa, S; Effect Of Tridax Procumbens Extracts On Wound Healing. Int. J. Pharmacogn., 33(1), 37–40 (1995). Doi: Https://Doi.Org/10.3109/13880209509088145 Upadhyay, R.K; Antiparasitic Potential Of Plant Natural Products Against Protozoans, Nematodes And Cestodes: A Review. JGMCP., 7(6) (2024). Doi: Http://Dx.Doi.Org/10.31579/2639-4162/140
66. Wasiullah, M., Yadav, P., Akanksha, Y And Singh, V.K: A Review On The Compartive Study Of Anti Dandruff Properties Of

Cosmeceuticals: Neem, Lemon. World. J. Pharm. Res., 12(1), 1000-1011 (2022).

67. Yakaew, S., Itsarasook, K., Ngoenkam, J., Jessadayannamaetha, A., Viyoch, J And Ungsurungsie, M: Ethanol Extract Of Terminalia Chebula Fruit Protects Against UVB- Induced Skin Damage. Pharm. Biol., 54(11), 2701–07 (2016). Doi: Https://Doi.Org/10.1080/13880209.2016.1179768