A Report

On

Participation of students and faculty in

One-Day National Conference on Recent Trends in Biological Sciences for Rural Development- Opportunities and Challenges

Organized By:

Department of Botany,

Yogeshwari Mahavidyalaya, Ambajogai.

Day & Date: Saturday, January 17,2026.

Participation: 06 UG FY students and 01 faculty member

Dr. R. A. More, (HOD), Department of Microbiology, Dayanand Science College, Latur

Miss. Kumbhar Vaishnavi Ashok

Miss. Bore Shreya ramlin

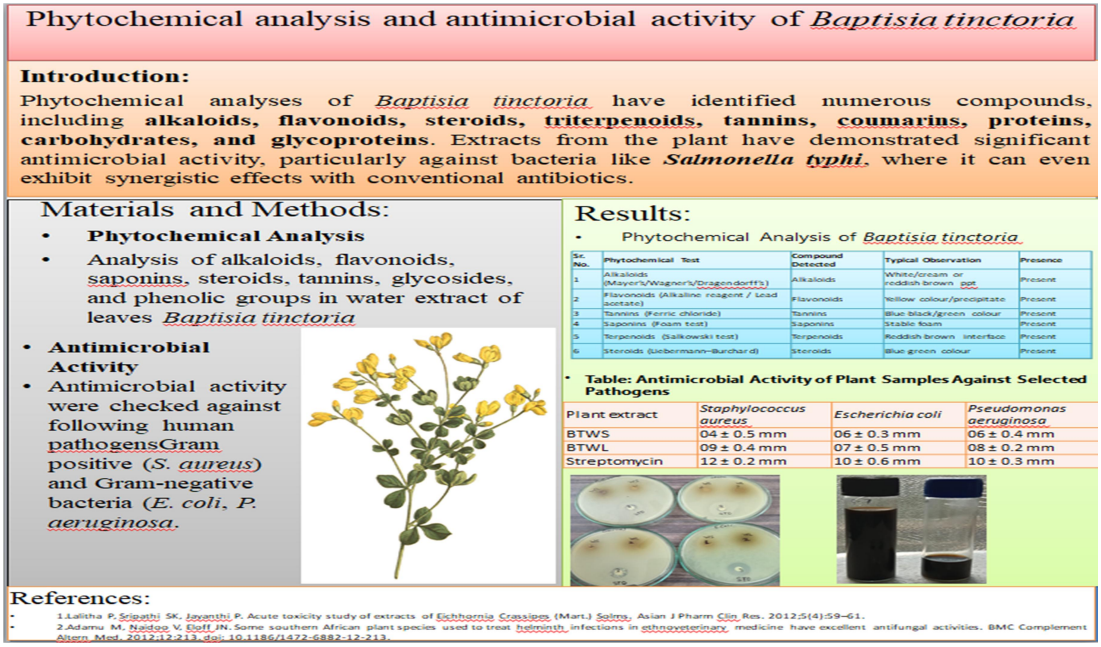
Miss. Patil Rutuja Rajkumar

Miss. Shaikh Sauleha Asif

Miss. Luhefa sayyed hishamuddin refai

Miss. Nikita patil

Poster presented by students:



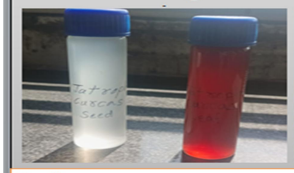
Phytochemical analysis and antimicrobial activity of *Jatropha curcus*

Introduction:

Jatropha curcas exhibits significant antimicrobial potential due to its rich phytochemical profile, containing compounds like alkaloids, tannins, flavonoids, saponins, and steroids, which show activity against various bacteria and fungi, including some antibiotic-resistant strains, with extracts often demonstrating broad-spectrum inhibition and low Minimum Inhibitory Concentrations (MICs), highlighting its promise in traditional medicine and pharmaceuticals for topical treatments.

Materials and Methods:

- **Phytochemical Analysis**
- Analysis of alkaloids, flavonoids, saponins, steroids, tannins, glycosides, and phenolic groups in water extract of leaves *J. curcas*.
- **Antimicrobial Activity**
- Antimicrobial activity were checked against following human pathogensGram positive (*S. aureus*) and Gram-negative bacteria (*E. coli*, *P.*



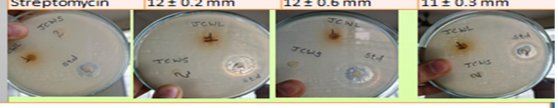
Results:

- **Phytochemical Analysis Table — *Jatropha curcas***

Sr. No.	Phytochemical Test	Compound Detected	Typical Observation	Presence
1	Alkaloids (Mayer's/Wagner's/Dragendorff's)	Alkaloids	White/cream or reddish brown ppt	Present
2	Flavonoids (Alkaline reagent / Lead acetate)	Flavonoids	Yellow colour/precipitate	Present
3	Tannins (Ferric chloride)	Tannins	Blue black/green colour	Present
4	Saponins (Foam test)	Saponins	Stable foam	Present
5	Terpenoids (Salkowski test)	Terpenoids	Reddish brown interface	Present
6	Steroids (Liebermann–Burchard)	Steroids	Blue green colour	Present
7	Glycosides (Keller–Killiani test)	Cardiac glycosides	Brown ring at interface	Present
8	Phenolics (Ferric chloride)	Phenols	Blue/green colour	Present
9	Anthraquinones (Borntrager's test)	Anthraquinones	Pink/red colour	

- **Table: Antimicrobial Activity of Plant Samples Against Selected Pathogens**

Plant extract	*Staphylococcus aureus*	*Escherichia coli*	*Pseudomonas aeruginosa*
JCWS	06 ± 0.5 mm	08 ± 0.3 mm	08 ± 0.4 mm
JCWL	08 ± 0.4 mm	06 ± 0.5 mm	09 ± 0.2 mm
Streptomycin	12 ± 0.2 mm	12 ± 0.6 mm	11 ± 0.3 mm



References:

- Aladag H, Ercisli S, Yesil DZ, Gormez A, Yesil M. Antifungal activity of green tea leaves (Camellia sinensis L) sampled in different harvest time. Pharmacog Magaz. 2009;5:437–440.
- Emeruwa AC. Antimicrobial substance from Carica papaya fruit extracts. Lloydi. 1982;45(5):123–7. doi: 10.1021/np50020a002. |DOI| |PubMed| |Google Scholar|

Pharmacological properties of *Vernonia cinere*

Introduction:

Vernonia cinerea (Purple Fleabane) possesses significant pharmacological properties, including potent **antioxidant, anti-inflammatory, antimicrobial, antifungal, analgesic, and antipyretic** effects, traditionally used for respiratory issues, digestive disorders, and skin ailments, with emerging research supporting roles in managing pain, fever, diabetes, and even aiding smoking cessation, primarily due to its rich content of terpenoids (like sesquiterpene lactones), flavonoids, and phenolic compounds.

Materials and Methods:

- **Phytochemical Analysis**
- Analysis of alkaloids, flavonoids, saponins, steroids, tannins, glycosides, and phenolic groups in water extract of leaves *J. curcas*.
- **Antimicrobial Activity**
- Antimicrobial activity were checked against following human pathogensGram positive (*S. aureus*) and Gram-negative bacteria (*E. coli*, *P. aeruginosa*.

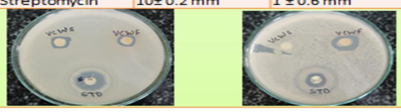
Results:

Phytochemical analysis of *Vernonia cinerea*

Phytochemical Group	Result (Presence)	Common Tests Used	Notes / Major Constituents
Alkaloids	✔ Present	Dragendorff's, Mayer's, Wagner's	Contribute to anti-inflammatory effects
Flavonoids	✔ Abundant	Shinoda test, Alkaline reagent test	Luteolin, Quercetin, Kaempferol, Apigenin
Phenolic Compounds	✔ Strongly present	Ferric chloride test	Caffeic acid, Chlorogenic acid, Gallic acid
Tannins	✔ Present	Ferric chloride, Lead acetate test	Astringent and antimicrobial activity
Saponins	✔ Present	Foam test	Anti-inflammatory, expectorant properties
Terpenoids	✔ Present	Salkowski test	α-amyrin, β-amyrin, lupeol

- **Table: Antimicrobial Activity of Plant Samples Against Selected Pathogens**

Plant extract	*Staphylococcus aureus*	*Escherichia coli*	*Pseudomonas aeruginosa*
VCWS	078± 0.5 mm	10 ± 0.3 mm	07 ± 0.4 mm
VCWL	06 ± 0.4 mm	06 ± 0.5 mm	06 ± 0.2 mm
Streptomycin	10± 0.2 mm	1 ± 0.6 mm	11 ± 0.3 mm



References:

- Chi VV. Dictionary of medicinal plants in Vietnam. Vietnam. Publ. Med. 2012;1:99–100.
- Soyang NJ., Verpoorte R. A review of the medicinal potentials of plants of the genus Vernonia (Asteraceae) J. Ethnopharmacol. 2013;146:681–723. doi: 10.1016/j.jep.2013.01.040.
- Quattrocchi U. CRC World Dictionary of Plant Names: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. 1st ed. CRC Press; Boca Raton, FL, USA: 1999.

Yogeshwari Education Society's

Yogeshwari Mahavidyalaya, Ambajogai

Dist. Beed-431517 (MS)

Certificate

This is to certify that, Ms/Mrs/Miss/Dr. Vaishnavi Ashok Kumbhar

from Dayanand Science College, latur has successfully Attended / presented a Abstract/Paper/Model in the Poster session in One Day National Conference on the "Biological Sciences for Rural Development" held on 17th January, 2026

Title of the presentation : .....

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Convener & Treasurer
Dept. of Botany

Prof. Dr. M.V. Kanetkar
Principal
Chief Organizing Secretary

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Name and signature of Convener/Coordinator- Dr. R. A. More

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