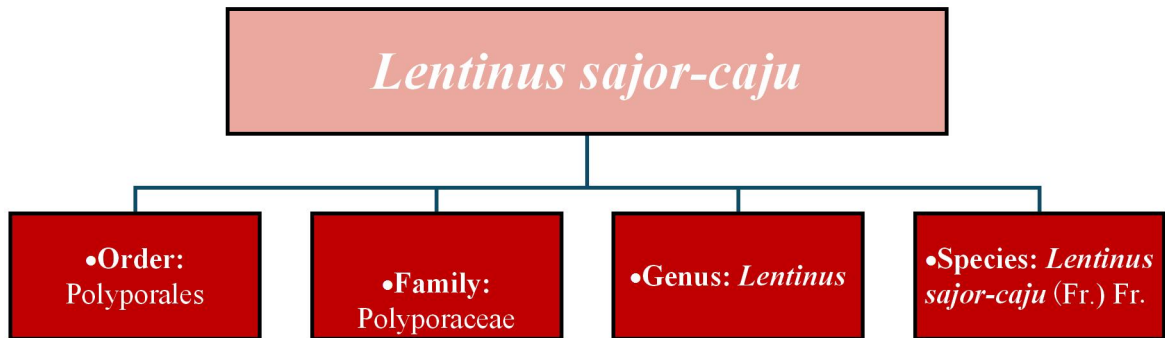


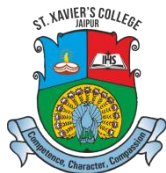
## Sajor-caju



## Habit and Habitat

*Lentinus sajor-caju* is a basidiomycete known for its edible and nutritious basidiocarp. It thrives in a variety of climates, commonly found on dead or decaying lignocellulosic substrates like paddy straw, coconut mesocarp, and other agricultural waste. This mushroom is known for its rapid colonization, efficient substrate utilization, and ability to grow in clusters, making it an important species for commercial cultivation.

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## Morphology

- **Cap (Pileus):** Typically white to light brown, fan-shaped, with a smooth surface and wavy margins. The cap can reach 5-15 cm in diameter, depending on substrate and environmental conditions.
- **Stipe (Stalk):** Short, thick, and lateral or absent, depending on growth conditions. It often exhibits a dense, fibrous texture.
- **Gills (Lamellae):** White, densely packed, and decurrent, extending down the stipe when present.

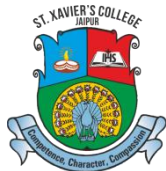
## Reproduction

- **Spore Characteristics:** Spores are smooth, cylindrical, and hyaline, producing white spore prints.
- **Spore Germination:** Germination typically occurs within 48-96 hours under favorable conditions, forming a dense, pure white mycelium.
- **Mycelium Development:** The primary mycelium is clampless and sterile, while the secondary mycelium, formed by the fusion of compatible primary mycelia, is fertile and features clamp connections.

## Nutrient Content

Sr. No.	Composition	Percentage (%)
1	Protein	15.0% - 40.0%
2	Carbohydrates	35.0% - 45.0%
3	Fat	0.5% - 5.0%
4	Crude fiber	6.0% - 13.0%
5	Ash	5.0% - 10.0%

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## Medicinal Properties

### Antioxidant Activity

- *L. sajor-caju* exhibit significant antioxidant properties, attributed to high levels of phenolics and flavonoids. These compounds effectively scavenge free radicals and chelate metal ions, contributing to oxidative stress reduction.

### Anti-Inflammatory Effects

- Hydroethanolic extracts of *L. sajor-caju* have demonstrated anti-inflammatory effects by downregulating the expression of COX-2 and iNOS, key enzymes involved in inflammatory pathways.

### Antimicrobial Properties

- The mushroom exhibits antimicrobial activity against various pathogens, including *Staphylococcus aureus*, *Escherichia coli*, and *Candida albicans*, suggesting its potential as a natural antimicrobial agent.

### Antihypertensive Potential

- Studies on spontaneously hypertensive rats have shown that hot water extracts of *L. sajor-caju* can lower systolic and diastolic blood pressure, as well as heart rate, indicating its potential in managing hypertension.

### Antidiabetic and Anti-Obesity Effects

- Beta-glucan-rich extracts from *L. sajor-caju* have been found to prevent glucose intolerance, insulin resistance, and inflammation in high-fat diet-induced obese mice, highlighting its role in metabolic health.

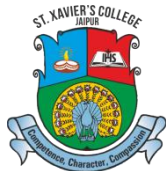
### Nutritional Value

- *L. sajor-caju* is rich in proteins, carbohydrates, vitamins (such as B1, B2, and C), and minerals (including calcium, iron, and potassium), making it a nutritious addition to the diet.

## References

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- Adel et al., 2023. "Cultural and Nutritional Characteristics of Pleurotus Mushrooms in Egypt." Journal of Fungal Research.

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## DEPARTMENT OF SCIENCE

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- Palacios, I., Lozano, M., Moro, C., et al. (2011). Antioxidant properties of phenolic compounds occurring in edible mushrooms. *Food Chemistry*, 128(3), 674–678.

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