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Ethnomedicinal plants used for immunity booster to fight against SARS CoV-2 virus of COVID-19 by ethnic people of Gumla district of Jharkhand

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Abstract : India is one of the countries to have recorded the first case of COVID-19 in January 2020 and hence, is among the nations, most vulnerable to coronavirus epidemic. Despite huge and multiple challenges, India has been demonstrating unwavering commitment in its fight against the pandemic these actions have been lauded by WHO.¹ SARS CoV-2 stands for “Severe acute respiratory syndrome coronavirus 2” is the strain of coronavirus that causes respiratory illness responsible for the COVID-19 pandemic.^{2,3} E gene of the virus is detected from the sample of covid-19 patient. The coronavirus E protein is a small membrane protein that has an important role in the assembly of Virions where it may induce membrane curvature or aid in membrane scission.⁴ This article deals with the several plant species used for immunity booster by ethnic people of Gumla district and 20 plants and their way of administration has been described in the present paper.

Key words: COVID-19, SARS CoV-2, Pandemic, E gene

INTRODUCTION

Jharkhand is a state in eastern India. The state shares its border with the states of Bihar to the north, Uttar Pradesh to the northwest, Chhattisgarh to the west, Odisha to the south and West Bengal to the east.⁵ Gumla is in the southern part of the Chota Nagpur Plateau, which forms the eastern edge of the Deccan Plateau. It is predominantly a tribal district.⁶ The first case of the COVID-19 pandemic was confirmed in the Jharkhand on 31st March as a Malaysian woman came positive on the test.⁷ Now a day this virus is spreading very quickly and more and more cases confirms

daily. Symptoms may or may not be detected among infected persons. E gene of the virus is detected among people of infected ones.⁴ Till date there is no vaccine or treatment available for this pandemic so many plants are using for boosting immunity for fight against it. Enhancing the body's natural defense system (immunity) plays an important role in maintaining optimum health.⁸ Older adults are at risk for malnutrition, which may contribute to their increased risk of infection.⁹ Food rich in proteins, glucose, vitamin C and D are recommended for faster recovery from viral infections.¹⁰⁻¹² The present paper contributes to Ethnomedicinal Botany regarding plants having improving immunity power of the body.

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MATERIALS & METHODS

Various kinds of allopathic drugs have been used now a day for boosting immunity system of our body but they result in kinds of side effects thus the traditional method of using plants for immunity booster is highly appreciated by people of Jharkhand state. Different plant species were collected from different blocks and villages of Gumla

district via conversation with tribes. Firstly, field trips were conducted and local Vaidya's were contacted. All information regarding such plants was gathered. Detailed information regarding Botanical identification plants, local name, parts used in the medicine was recorded, herbaria was deposited with all gathered information in the DSPMU Ranchi.

Table 1: List of plants used for immunity booster and serve to fight against SARS CoV-2 of COVID-19 by ethnic people of Gumla district and their way of administration

Sl. No.	BOTANICAL NAME	FAMILY	COMMON NAME	PLANT PART USED
1.	<i>Oscimum basicicum</i>	Lamiaceae	Basil/tulsi	Leaves extract
2.	<i>Alium sativum</i>	Amaryllidaceae	Garlic/lahsun	Cloves. Active principal Allicin
3.	<i>Curcuma longa</i>	Zingiberaceae	Turmeric/haldi	Roots
4.	<i>Elettaria cardamomum</i>	Zingiberaceae	Cardamom/ilaychi	Seed
5.	<i>Trachyspermum ammi</i>	Apiaceae	Ajwain	Leaves and seeds
6.	<i>Citrus limon</i>	Rutaceae	Lemon/nimbu	Fruit
7.	<i>Zingiber officinale</i>	Zingiberaceae	Ginger/adrak	Tubers
8.	<i>Cinnamomum verum</i>	Lauraceae	Cinnamon/dalchini	Bark
9.	<i>Citrus reticulata</i>	Rutaceae	Orange/santara	Fruit
10.	<i>Cuminum cyminum</i>	Apiaceae	Cumin/jeera	Seeds
11.	<i>Withania somnifera</i>	Solanaceae	Ashwagandha	Roots
12.	<i>Trigonella foenum-graecum</i>	Fabaceae	Fenugeek/ methi	Seed
13.	<i>Tinospora cordifolia</i>	Menispermaceae	Giloy	Root/stem
14.	<i>Cinnamomum tamala</i>	Lauraceae	Bay leaf/Tejpata	Extract of leaf
15.	<i>Piper nigrum</i>	Piperaceae	Black pepper/kaalee mirch	Seeds
16.	<i>Phoenix dactylifera</i>	Arecaceae	Date palm/Jaggery	Fruit
17.	<i>Carica papaya</i>	Caricaceae	Papaya/papita	Fruit
18.	<i>Avena sativa</i>	Poaceae	Oats/jai	Seeds
19.	<i>Cucurbita pepo</i>	Cucurbitaceae	Pumpkin/kohda	Seeds
20.	<i>Helianthus annuus</i>	Asteraceae	Sunflower/surjmukhi	Seeds

RESULTS & DISCUSSION

The survey of many blocks and villages of Gumla district of Jharkhand revealed that the tribes are using many plants for boosting their immunity and for good health. After the survey we found that most of the herbal medicine are obtained from the nearby forest and are local wild weeds. They are taken mostly in the form of juice, pest, dry powder etc.

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