



PRESENTS
Special Session on

ASHWAGANDHA (**WITHANIA SOMNIFERA**)

A traditional important
medicine: Indian ginseng

Dec 22, 04:00 pm IST

FOR STUDENTS OF CLASS 5TH - 12TH

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KNOWLEDGE AND AWARENESS MAPPING PLATFORM

KNOWLEDGE SESSION 2022: EPISODE 17

ORGANISED BY: KNOWLEDGE AND AWARENESS MAPPING PLATFORM

A KNOWLEDGE ALLIANCE OF

National Institute of Science Communication and Policy Research
NIS&PR
सीएसआईआर-निसपर

ncpi

Date: 22nd December 2022

Topic: A traditional important medicine: Indian ginseng

Organized For: Class 5th – 12th

Category: Scientific and Life Skills

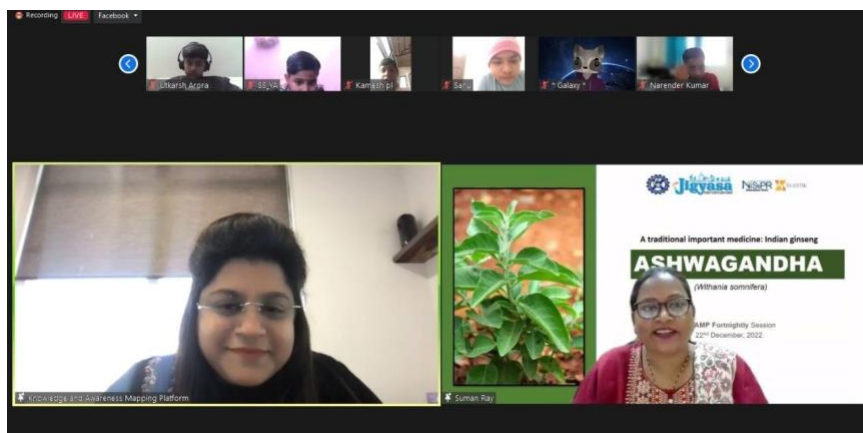
No. of Participants: 1100+ students from different schools across India

Speakers/Presenters: By Dr Suman Ray (Principal Scientist & PI Jigyasa, CSIR-NIScPR)

Overview:

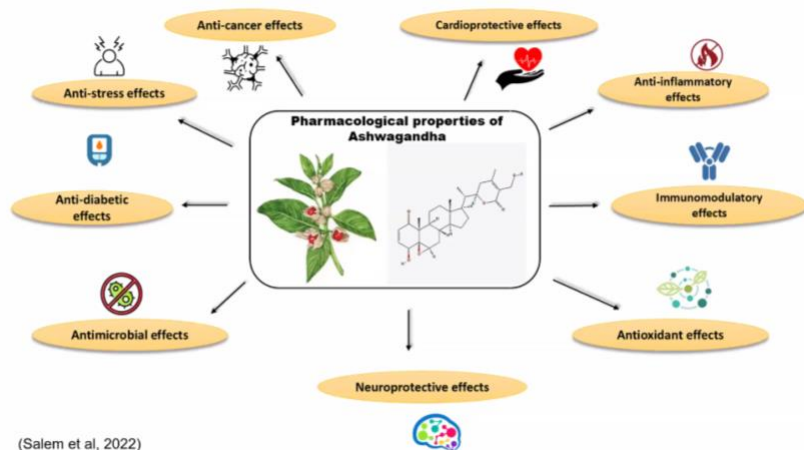
On December 22nd, KAMP conducted its 17th Special Knowledge Sharing Workshop on "A traditional important medicine: Indian ginseng, Ashwagandha (*Withania somifera*)," with over 1100 students from 5th to 12th standard from different schools across India as participants. The aim of this workshop was to help the students understand what ashwagandha is and its importance in Indian medicine.

The session was convened by Ms. Arika Mathur, a member of the KAMP Planning and Monitoring Committee, and was facilitated by Dr. Suman Ray (Principal Scientist and PI Jigyasa, CSIR-NIScPR). In this workshop, Dr. Suman Ray helped students understand what ashwagandha is, where it is



geographically located, the major biological activities of ashwagandha, as well as its commercial formulations.

According to the WHO, 80% of the population in developing countries depends almost entirely on traditional medicine practises and herbal medicines for their primary health care needs. Ashwagandha has traditional medicinal applications in various parts of



Ayurveda. Due to the biological activities of ashwagandha, it possesses anti-cancer effects, cardioprotective effects, anti-inflammatory effects, immunomodulatory effects, antioxidant

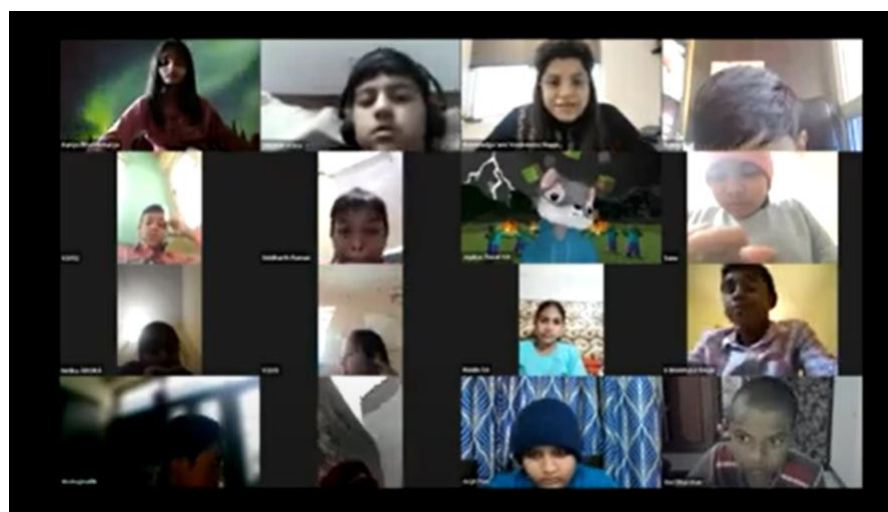
effects, neuroprotective effects, antimicrobial effects, anti-diabetic effects, anti-stress effects, etc.

Moreover, it has been observed that Ashwagandha has traces even in Ayurveda. There have been various excerpts in the ancient text of ayurveda like Charaka Samhita (1000 BCE), Sushruta Samhita (1000 BCE), Vrindamadhava (900 AD), Astanga Hridaya (600 AD), Bhavaprakasa (1600 AD), and Cakradatta (1100 AD).

In the Rig Veda and Atharvaveda, Ashwagandha is named "Aswabati."

The word "Rasayana," mentioned in Ayurveda, depicts medicinal herbs with a number of pharmacological characteristics, where Ashwagandha, as we know, is one of the most important Ayurvedic Rasayana due to its medicinal properties.

The root part of Ashwagandha can be used for the treatment of asthma, bronchitis, leucoderma, tuberculosis, liver problems, heart disorders, and arthritis. It acts as an antibacterial, antitumor, antioxidant, immunomodulatory, and neurotic regenerator. Adaptogenic activity, nootropic effect, hypothyroid activity, herbicidal potential, abortifacient, astringent, aphrodisiac, and emmenagogue (stimulates menstruation) have also been demonstrated in various studies.



The leaves can be used for the treatment of ulcers, painful swelling, external pains, syphilis, haemorrhoids, eyesores, boils, and edema. It acts as an aphrodisiac, anti-inflammatory, diuretic, hepatoprotective, anti-arthritis, and anti-cancerous.

The seeds can be used for diuretic, narcotic, or even hypnotic purposes. The plant as a whole has antidotal, insecticidal, larvicidal, antioxidant, immunomodulatory, neurotic regenerator, adaptogenic, hepatoprotective, and cardioprotective properties.

Ashwagandha in Ayurveda

- In *Rigveda* and *Atharvaveda* Ashwagandha is mentioned as "Aswabati".
- Ashwagandha is an important herb mentioned in Ayurveda that is *Charaka Samhita*, *Susruta Samhita* and *Astanga Hridaya*.
- The plant has been exceptionally acclaimed for its useful impacts in various diseases since old times.



- Ashwagandha is the most prominent Ayurvedic "**Rasayana**" medicinal herb, with a number of pharmacological characteristics:
 - ❖ Anti-inflammatory
 - ❖ Neuroprotective
 - ❖ Adaptogen/anti-stress
 - ❖ Anxiolytic
 - ❖ Anti-arthritis
 - ❖ Anticancer
 - ❖ Analgesic
 - ❖ Antioxidant (Mukherjee et al, 2021)
- ❖ Rasayana has been described in Ayurveda as a herbal or metallic preparation that upholds a youthful state of physical and mental health (Singh et al, 2011).
- ❖ Ashwagandha is mentioned in these texts as Vajigandha, Turangagandha, and Varahkarni, its uncommon synonyms (Mukherjee et al, 2021).

(Reference: Mukherjee et al, 2021)

Studies on Ashwagandha by CSIR Institutions

S.No.	Institute Name	Studies
1.	CSIR-Indian Institute of Integrative Medicine (IIIM), Jammu & Kashmir	Ashwagandha [AGB-002] cultivated in large scale and is currently being commercialized. Properties of this plant, such as tonic, anti-inflammation, antioxidant, immunomodulation, antitumor and anticancer contributed to its social advantage.
2.	CSIR-Central Drug Research Institute (CSIR-CDRI), Lucknow	Development of a novel anti-stroke/neuroprotective Phytopharmaceutical formulation from the roots of an Ashwagandha variety (NMITLI-118).
3.	CSIR-Central Institute of Medicinal and Aromatic Plants (CSIR-CIMAP), Lucknow	Commercialization of 'CIM-Pushti': Ashwagandha (<i>Withania somnifera</i>) variant that is rich in Withanolide-A with excellent yields, good root textural quality and tolerant to leaf blight.

The purpose of KAMP's Fortnightly workshops is to help students develop creativity, meaningful learning, and critical reading and thinking skills that bring out their inherent abilities. The vision of KAMP is to identify and capture Scientific and Technological temperament in students to make India – a Global Leader in the field of Science, Technology and Humanities.

Such workshops, conducted by KAMP deal with various topics that fall under the category of Science, Technology and Innovations, Scientific and Life Skills, Career & Professional Development, Academic Development and training the trainers/teachers.

KAMP believes that with exposure to such topics from experts within such specific fields, students will become aware of real-life situations and challenges, develop a helping, problem-solving nature wherever possible, understand their core values and personal interests, evaluate their skills within the given area and achieve their best in their most desirable way.

Organised By:

Knowledge and Awareness Mapping Platform
(KAMP Operations and Coordination Office)

Moderated By:

Ms. Arika Mathur
(Convener KAMP and Member KPMC)

Team Credits:

Mr Amit Kumar Shukla
(Head-Capacity Building Group, KAMP)

Ms Vishakha Gola

(Sr. Coordinator KAMP)

Workshop Partner: Swastik (CSIR-NIScPR)

