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Antibacterial activity of *Gymnema sylvestre* (Retz.) R. Br. and *Withania somnifera* (Linn.) Dunal

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Abstract
The importance of usual herbal medicinal system has now gained vital importance in urbanized countries has been briefly described. In this present paper is studied against bacterial infection. *Gymnema sylvestre* belongs to family Asclepiadaceae and called as Gurmar wherese *Withania somnifera* belongs to family Solanaceae and is commonly called as Aswaganha.

Keywords: Antibacterial activity, *Gymnema sylvestre, Withania somnifera, Medicinal use*

Introduction
Traditional use of herbal medicines implies substantial historical use and this is certainly true for many products that are available as 'Traditional herbal medicines'. In many developing countries, a large proportion of the population relies on traditional practitioners and their armamentarium of medicinal plants in order to meet health care needs. Although modern medicine may exist side-by-side with such traditional practice, herbal medicines have often maintained their popularity for historical and cultural reasons. The use of plants for medicinal purposes is as old as our civilization. The first known written record of curative plants was of Sumerian herbal of 2200 BC. In the 5th century BC, The Greek doctor Hippocrates list out some 400 herbs in common use. Dioscorides, in the Ist century AD, wrote a herbal by using 600 plants which ultimately became the base for many later works. Herbs have been used for uncounted time for various purposes like healing the sick and infirm. Most of the people still continue to use herbs to benefit their bodies. People thought that herbs keep the body in tune with nature as nature intended and maintain proper balance. Many scientific studies are still continued with modern research following the lead of old folklore and herbal uses to help finding new western medicine. Man has also been aware of the effects of Herbs on the body, mind and emotion.

Methodology
Medicinal plants were collected and preserved for the future use. The plants were pressed in old newspapers and blotting sheets for dehydration in strong ply board. The Species were changed to fresh sheets after an interval of 24 hours to 2-3 days depending on the weather conditions until the specimens were completely dry. The plant species were identified with the help of available floras. Doubtful medicinal plants are confirmed at the herbaria of Forest Research Institute (F.R.I.) and Botanical Survey of India (B.S.I.) Dehradun.
Species is cultivated field areas in some part of Uttar Pradesh. These are widely grown as medicinal plants. There is no method to preparation of medicinal use reported by earlier researchers. Perusal of literatures on medicinal plants. Singh 1993 [4], Tomar and Singh 2005 [6], Tomar and Singh 2006 [7], Tomar 2007 [8], Dhiman and Dhiman 2008 [1], Tomar 2008 [9], Prachi *et al.* 2009 [3], Singh *et al.* 2009 [5], Tomar 2009 [10], Jain and Suryavanshi 2010 [2], Tomar 2011 [11], Tomar 2015 [12], Tomar 2015 [13], Tomar 2015 [14], Tomar 2016 [15], Tomar 2017 [16] and Tomar 2017 [17]. In this present study a brief description of species are provided along with its medicinal use.
This method to preparation of remedy has been recorded for the first time by the author and is used as an antibacterial activity.

Botanical description of *Gymnema sylvestre*
The plant can be described as a large, pubescent, woody climber. its leaves are elliptic, opposite or ovate. The small flowers are yellow and in umbellate cymes. The follicles are terete, lanceolate and up to 3 inches in length. The plant is native to the tropical forests of southern and central India. I

Chemical composition *Gymnema sylvestre*
Gymnema contains gymnemic acids and alkaloids.

Antibacterial activity of *Gymnema sylvestre*
Medicinal uses of *Gymnema sylvestre*
The extract of leaves of *Gymnema sylvestre* is applied to antimicrobial activity against Bacillus pumilis, B. subtilis, Pseudomonas aeruginosa and Staphylococcus aureus and inactivity against Proteus vulgaris and Escherichia coli.

Botanical description of *Withania somnifera*
Herb usually 30-60 cm grow up to 170 cm. Shape: upright and stout shrub with central stem. Branches: star-shaped branching; branches covered in fine hairs. Leaves: alternate and ovate, up to 10 cm long and up to 5 cm wide. Flowers: yellow petals on the inside with a green outer-covering layer.

Chemical composition of *Withania somnifera*
The plant contains steroidal lactones, which are commonly called as withanolides.

Antibacterial activity of *Withania somnifera*
Medicinal uses of *Withania somnifera*
The extracts of leaves of *Withania somnifera* is applied to antimicrobial activity in-vitro against one gram positive bacteria (*Bacillus subtilis*), two gram negative bacteria (*Pseudomonas aeruginosa* and *Enterobactor aerogens*) and one fungus (*Aspergillus flavus*).

Result and Discussion
In the modern world it has been realized the herbal drugs strengthens the body system specifically and selectively without side effects. Therefore, study was conducted and revealed that *Gymnema sylvestre* and *Withania somnifera* are used as Ayurvedic medicines in some part of Uttar Pradesh.

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