

# Lectin activity of homeopathy drugs

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## Abstract

Lectins are useful for protective effect of plants which are similar to antibodies. They are also helping in the selective binding of *Rhizobia* during the initiation of root nodules of legume plants. Homeopathic mother tinctures are used to find out their lectin activities, they are- *Arnica montana*, *Cassia sophara*, *Caulophyllum*, *Ficus indica*, *Ficus religiosa*, *Nux vomica*, *Solanum xantocarpum*, *Blata orientalis*, *Spongia tosta* and *Urtica urens*. Nobody tried for mother tinctures for the purpose of lectin activity, this is a first ever attempt to study the lectin activity to show co-relation with remedial effect.

**Keywords:** Lectin, Homeopathic, mother tinctures, phytohemagglutins

## INTRODUCTION

Many wild and cultivated plants accumulate lectins or agglutinins in their seeds or vegetative tissues. For the sake of simplicity lectins can be defined as (glycol) proteins which bind reversibly to specific mono or oligosaccharides without altering the structure of the bound legend. The initial discovery of lectins dates back to 1888 when Stillmark found a proteinaceous haemagglutinating factor in castor beans (*Ricinus communis*) (Peumans & Damme, 1995)

Lectins show wide diversity in their sugar specificities and have proved to be useful for probing the structural features of cell surface glycoconjugates. As a result, lectins have widespread applications in various fields of research in biochemistry, medicine and cell-biology (Sawhney and Bhide, 1990).

Lectins were first identified in extracts of plant seeds found to content soluble factors that glutinate RBC's. The factors responsible for hemagglutination were called phytohemagglutins. Similarly in animal source also lectins are isolated (Brown and Hund, 1978).

Lectins are useful for protective effect of plants which are similar to antibodies. They are also helping in the selective binding of *Rhizobia* during the initiation of root nodules of legume plants. As well as they fervors sugar transport in the plants as for storing the sugar in storage organ of plants (Brown and Hunt, 1978).

Homeopathic mother tinctures are used to find out their lectin activities, they are- *Arnica montana*, *Cassia sophara*, *Caulophyllum*, *Ficus indica*, *Ficus religiosa*, *Nux vomica*, *Solanum xantocarpum*, *Blata orientalis*, *Spongia tosta* and *Urtica urens*. (selection of drugs as per materia medica- Boerick W.) Nobody tried for mother tinctures for the purpose of lectin activity, hence decided to study the lectin activity to show co-relation with remedial effect.

## MATERIAL AND METHOD

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Mother tinctures are purchased from Back and Coal Co. and stored at 4°C. 1 ml O+ blood is collected from local hospital and centrifuged. Serum is used for estimation of protein (Waheed and Gupta, 1996; 1996a) and carbohydrates (Liu et.al., 1973; Dubois et al., 1977). Erythrocytes are washed after giving enzyme treatment and 4% erythrocytes are store at 4° C. Drugs are double diluted and equal volume of erythrocytes are mixed and crude lectin activity is tested (Nandedkar, 1984 ).

The double dilutions of different sugars (i.e. Galactose, Lactose, D-glucose) are mixed thoroughly with lacin source. After one hour of incubation at room temperature RBC's are allowed to react with sugar and aaglutination is observed under microscope after ½ an hour. Results are discussed in % of agglutination.

## RESULTS AND DISUSSION

Estimation of protein shows that, protein is 8.0 g/100 ml. while carbohydrates in terms of glucose are 5.625 mg/100 ml.

Estimation of protein (Waheed and Gupta,1996; 1996a)	Estimation of carbohydrate in terms of glucose (Liu et. al., 1973; Dubois et. al.,1977)
8.0 gm/100 ml.	5.625 mg/100 ml.

Lectins are similar to the antibodies which protect the plants from their herbhihours (Brown and Hunt, 1978). It is here may be concluded that homeopathy helps after diluting the drugs with higher potencies creating harmless effect of lectin, simultaneously which activates the tissues for their vitality.

The results support that *Nux vomica* alone doesn't works effectively, because *Nux vomica* lacking the lectin activity. It is known thing that along with *Nux vomica* their provides complimentary remedies.

In addition to above, also I want to draw the results that the weaker activity of lectin are used in lower potencies hence higher potencies show stronger activity of lectin.

After observation it is suggested that highest agglutination activity indicated effective medicinal value of the drug. Off course weaker lectin activity of medicinal plants also shows effective remedial property, the reason is not yet clear.

This findings correlate with the lectin property of various plants and animal origin, is that the antibodies present in the drugs improve immunity power. This revel that using lactose pills facilitates

the activity of drug, because almost all drugs show no effect of lactose on agglutination. As well as the stronger, medium and weaker agglutination activity of various drugs shows correlation with uses of their potency in homeopathy treatment.

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