International Journal of Engineering Research and General Science Volume 5, Issue 1, January-February, 2017
ISSN 2091-2730

# Assessment of plant extracts on the growth of M.canis and H. capsulatum

Surendra kr Prasad, Namita kumari

Department of Botany, Magadh Mahila College

Patna University Patna

**Abstract-** Plants are good sources of phytochemicals hence they are used variously in different medical uses . In this study the growth activity of M.canis and H.capsulatum on different plant parts of Argemone maxicana, Caesalpinia boundicella, Curcuma longa, Butea monosperma, Arjuna indica, Eclipta alba, Melia azadirachta and Psoralia corylifolia were assessedby sabourd dextrose medium .Some plants showed poor growth of dermatophytic fungi while some fungi promote the growth of fungi.

**Key words:-** phytochemicals, Dermatophytic fungi, sabourd dextrose

**Introduction:-** Plants which have one or more of its organs are sources of various organic and inorganic compounds , used for the therapeutic purposes , are known as medicinal plants On the basis of report of kretivar and Basu {1918} Following plants of the noted local plants were taken to observe the influence of Acetone alcoholic and aqueous extracts on the mean dry Wt.of Mycellium

| Common name | Botanical name | plants part |
|---|---|---|
| Fringhi Dhatura | Argemone maxicana | leaf |
| Arjun | Arjuna indica | Bark |
| Palash | Butea monosperma kunze | seed |
| Kati Karanj | Caesalpinia boundicella | seed |
| Turmeric | Curcuma longa LSPPL | Rhizome |
| Machrand buboi | Eclipta alba Hassole pl. | Leaf |
| Neem | Melia azadirachta LSPPL | Bark |
| Babchi | Psoralea corylifolia LSPPL | seed |

**Procedure:**

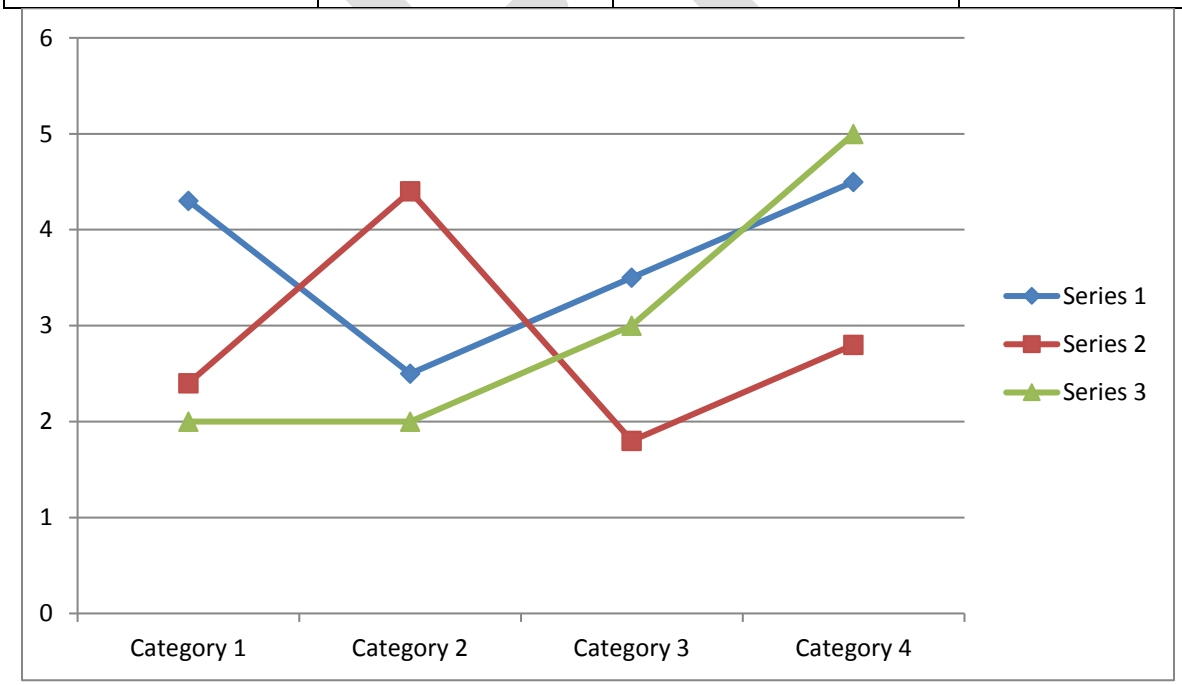
Ten gram each of the above part was taken on dry weight basis and separately grounded in a grinder and extracted with 25ml rectified spirit and acetone. The extract were filtered and transferred to graduated test tube and kept in incubator at 60˚C to remove the acetone by evaporation the ue was suspended in 10ml of sterilized distilled water. The aqueous extract was prepared by boiling the above amount of material in 50ml of water for 30min. over water bath .The extract was filtered and adjusted to the volume of 10ml and autoclaved at 15 Psi for 15 minutes. For observing the influence of these extracts 1ml/49ml sterilized **SD** liquid medium except for the control. Selected fungal sps were grown on a thin layer of SDA medium in petridishes at room temperature .After incubation period of 10 days 5mm blocks were cut and transferred using asceptic technique to 250ml conical flask containing 50ml liquid medium of specific composition required to study the specific physiological aspect of the concern fungi .PH of the medium was adjusted to 5.8 with the help of 0.1 M KOH and 0. - 5 M KH2PO4 solution and inoculated for 15 days at 25+10c After the inoculation of 15 days , the mycelia mats were collected by filtering them through pre- weighed whatmans one to one filter paper individually and it was transferred to butter paper envelope .it was dried inside and incubated at temperature of 60±1c . After 24 hours of drying procedures the envelopes of mycelia mats were kept in sealed desicator over fused cacl2 . The actual weight of fungal mycelial were then calculated using the formula in mg

W=W1-W2, W= Wt of the mycelium , W1 =Wt of the filter paper , W2= Wt of the filter paper with mycelium

**Observation:**

**Temp.25±1˚C** **wt.expressed in mean dry wtin mg**

| Plant | Solvent | M. canis | H. capsulatum |
|---|---|---|---|
| Argemone maxicana | water | 148.000±0.577 | 76.000±1.453 |
| | acetone | 141.000±2.886 | 79.000±1.153 |
| | Ethanol | 144.000±1.5389 | 72.000±2.887 |
| Arjuna indica | water | 301.000±1.135 | 82.000±1.55 |
| | Acetone | 294.000±1.453 | 80.000±2.886 |
| | Ethanol | 290.000±2.886 | 78.00±2.086 |
| Butea monosperma | Water | 280.000±2.887 | 150.000±1.155 |
| | acetone | 270.000±1.453 | 152.555±0.882 |
| | Ethanol | 278.000±1.158 | 150.000±1.455 |
| Caesapinia boundicella | Water | 241.000±1.155 | 254.000±0.577 |
| | Acetone | 228.000±0.852 | 235.000±2.887 |
| | Ethanol | 240.000±1.453 | 234.666±1.453 |
| Curcuma longa | Water | 353.000±1.155 | 142.000±1.153 |
| | Acetone | 355.000±2.887 | 140.000±1.154 |
| | Ethanol | 350.000±1.155 | 142.000±1.155 |
| Eclipta alba | Water | 75.000±1.155 | 214.000±1.155 |
| | Acetone | 72.000±1.155 | 212.000±0.577 |
| | Ethanol | 60.000±0.577 | 214.000±1.153 |
| Melia azadirachta | Water | 202.000±1.483 | 137.000±1.153 |
| | Actone | 201.000±2.082 | 135.000±1.153 |
| | Ethanol | 200.000±1.153 | 132.000±0.333 |
| Psoralia corylifolia | water | 342.666±1.452 | 101.000±1.156 |
| | Acetone | 340.000±1.533 | 106.000±1.153 |
| | Ethanol | 346.666±1.453 | 104.000±1.153 |
| Control CD at 1% | | 628.000±0.577 | 568.333±1.155 |
| | | | |



**Result:**

The result is highly significant for both the sps. Curcuma longa / in control condition at 1 % is found to be the best suitable for the Mycelial fungal growth of M. canis while the worst growth of Mycelial fungal was found to be in Eclipta alba in the case of Histoplasma capsulatum caesalpinia boundicella & in control condition at 1% was found to be the best growth of Mycelial fungas while the worst fungal growth was observed in Argemone maxicana.Conclusively it is said that Eclipta alba is the best checker of M. canis while Argemone maxicana is best checker of the fungus Histoplasma capsulatum fungus. The growth performance of these plant extract in **M.canis** were as:

Eclipta alba < Argemone maxicana < Melia azadiarachta< Caesalpinia bondicella < Buetia monosperma<Arjuna indica <Psoralea corilifolia <Curcuma longa <control

The poor performance of growth of fungus refers the check or inhibitory effect on fungus in according to their check performance of these plant extract in Histoplasma capsulatatum were as : Argemone maxicana < Arjuna indica < Psoralea corilifolia <Melia azadiarachta< Curcuma longa < Butea monosperma < Eclipta alba < Caesalpinia bondicella < Control cd.

**Discussion**

1Plant leaves extracts are used as various purposes. Tarafder CR, Nath D, Sethi N, Srivastav S, Jain AK and Srivastava R, Surveyed on indigenous medicinal plants used for abortion in some districts of Uttar Prades;. Gupta AK and Mishra SK,showed Indigenous phytotherapy for diabetes from Chhattisgarh,Singh KK and Kumar K, observed Ethnotherapeutics of some medicinal plants used as antipyretic agents among the tribals of India, HP, Kumar J and Sahu HB, Native medicinal uses of plants for anthelmensis (Kirmi) at Ranchi District of Jharkhand, Lipipun V, Kurokawa M, Suttisri R, Taweechotipatr P, Pramyothin P, Hattori M, and Shiraki K, studied Efficacy of Thai medicinal plant extracts against herpes simplex virus type infection in vitro and in vivo, Antiviral Res; Kirtikar KR and Basu BD, Indian Medicinal plants. (M/s Bishen Singh, Mahendra Pal Singh, New Cannaught Place, Dehra Dun), Bennett RN, Mellon FA, Foidl N, Pratt JH, Du pont MS, Perkins L and Kroon PA, Profiling glucosinolates and phenolics in vegetative and reproductive tissues of the multi-purpose trees Moringa oleifera; L. and Moringa stenopetala L. Saluja MP, Kapil RS and Popli SP, Studied in medicinal plants: Part VI Chemical constituents of Moringa oleifera Lam. And Isolation of 4-Hydroxymellein, Indian J Chem, Bhattacharya SB, Das AK and Banerji N, Chemical investigations on the gum exudates from Sajna (Moringa oleifera), Faizi S, Siddiqui BS, Saleem R, Siddiqui S and Aftab K, Isolation and structure elucidation of new nitrile and mustard oil glycosides from Moringa oleifera and their effect on blood pressure; Caceres A, saravia A, Rizzo S, Zabala L, De Leon E and Nave F, Pharmacological properties of Moringa oleifera : Screening for antispasmodic, anti-inflammatory and diuretic activity, Lalas S and Tsaknis J, Extraction and identification of natural antioxidant from the seeds of the Moringa oleifera tree variety of Malawi, , Cebreva O, Morales O, Miollinedo P and Mendia P, Pharmacological properties of Moringa oleifera 1: Preliliminary screening for antimicrobial activity, Limaye DA, Nimbakar AY, Jain R and Mansoor A, Cardiovascular effects of aqueous extract of Moringa pterygosperma. Ghasi S, Nwobodo E and Ofili JO, Hypocholesterolemic effects of crude extract of leaf of Moringa oleifera Lam. In high fat diet fed wistar rats, M, Mazumdar UK and Chakrabarti S, Prakash AO, Tewari RK, Shukla S, Mathur R and Tewati KK CNs activities of methanolic extract of Moringa oleifera root in mice, Guevara AP, Vargas C, Sakurai H, Fuziwara Y, Hashimoto K, Maoka T, et al Prakash AO, Tewari RK, Shukla S, Mathur R and Tewati KK. Act as an anti-tumor promoter. Tahiliani P and Kar A, Role of Moringa oleifera leaf extract in the regulation of thyroid hormone status in adult male and female rats**.**

**Conclusion:-**

In this study different plant parts were assessed for the for the growth of dermatophytic fungi M.canis and H. capsulatum . finally it was seen that eclipta alba and Argemone maxicanawere showed least growth ,check the growth of both fungi while Curcuma longa and Caesalpinia boundicella were promote the growth of these fungi.

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