

## 6<sup>th</sup> World Congress on **Biotechnology**

October 05-07, 2015 New Delhi, India

### Suppression of weed *Lathyrus aphaca* (L) growth by 5-aminolevulinic acid producing rhizobacterial isolates

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*Lathyrus aphaca* (wild pea) is an important weed of mustard that affects the germination, growth and yield of mustard. Recently, production of phytohormone in high concentration by some rhizobacteria has been found to inhibit the seedling growth of certain plants. Therefore, one fifty four bacterial isolates were screened for production of aminolevulinic acid (ALA) and their stimulation/retardation effect on the growth of *Lathyrus aphaca* seedlings was studied on 0.8% water agar medium plates. Ten bacterial isolates i.e., HMM21, HMM22, HMM80, HMM86, HMM92, HMM97, HMM115, JMM11, JMM15 and JMM35 produced maximum ALA ranging from 15.0-25.0 µg/ml in glycine and succinate supplemented broth. These rhizobacterial isolates were tested for their effect on growth of weed under lab conditions. Bacterial isolates HMM22 and HMM86 were found to inhibit the growth of *Lathyrus aphaca* only at 5<sup>th</sup> day of seed germination. Bacterial isolate HMM21 was found to inhibit the growth of *Lathyrus aphaca* only at 10<sup>th</sup> day of seed germination. Rhizobacterial isolates HMM92, HMM97, HMM115, JMM15 and JMM35 were found to inhibit the growth of *Lathyrus aphaca* at both 5<sup>th</sup> and 10<sup>th</sup> day of seed germination. Thus, inoculation of rhizobacterial isolates could be exploited for their use as biological herbicide under pot and field conditions.

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### Opportunistic fungal infections in HIV/AIDS patients in India

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**Introduction:** The clinical profile of AIDS in India tends to be different from what is seen in the developed world, since the HIV infected individual in India lives in an environment with high prevalence of infectious diseases.

**Aims & Objectives:** Our main objectives were to investigate the occurrence of common opportunistic fungal infections and to evaluate the clinico-epidemiological profile of HIV/AIDS patients with degree of immunodeficiency in these patients.

**Materials & Methods:** Symptomatic HIV positive patients (n=280) of all age groups and both sexes were taken as subjects. Relevant clinical samples were collected and subjected to direct microscopy, culture isolation and serology. Identification and speciation of the isolates was done by the biochemical methods as per standard recommended procedures.

**Results:** There was no specific age distribution; patients belonged to a wide age group from 04 years to 68 years. The CD4 counts ranged from 16-1033 cells/µl with a median and mean CD4 count of 204.50 cells/µl and 265.48 cells/µl. Fungi were detected in 140 (59.82%) patients with *Candida species* (*C. albicans*, *C. tropicalis*, *C. krusei*, *C. parapsilosis*, *C. glabrata* and *C. kefyr*) being the commonest followed by *Aspergillus* spp. (7%), *Cryptococcus neoformans* (4%), *Penicillium* spp., *Alternaria* spp. and *Rhodotorula* spp. (1% each). Cryptococcal meningitis was diagnosed in 12 patients and Pneumocystis pneumonia in 8 patients.

**Conclusion:** This study suggests occurrence of severe immunosuppression in HIV patients with opportunistic infections and a prompt recognition and treatment of these infections is essential to prevent the progression to AIDS.

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