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RESEARCH AREAS:

- Processing of culture for cyanide and oil degradations
- Screening of HPV in human with different cancers

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RESEARCH INTEREST:

PROCESSING OF CULTURE FOR CYANIDE AND OIL DEGRADATIONS:

Cyanide thus released into the environment reaches the waster body as well as soil and causes very serious ill effect on the living forms of both systems. So it must be treated before being released in to the environment in order to reduce its toxicity. An approach to develop a cost effective method for the removal of cyanide from industrial waste water will be a boon for any industry. Bioremediation is a process, found to be a better alternative to remove cyanide completely from the waste water. It's amazing that various microorganisms are found to use cyanide for their metabolism. Working out opt consortia one can completely remove cyanide from the waste water.

Pollution caused by the oil spills adversely affecting the both aquatic and terrestrial ecosystem. Chemical and physical means of cleaning the oil spills are being developed but they may not able to remove the oil completely from the environment. Rather, they leave toxic intermediate which again cause different problems in the ecosystem through biomagnifications. As an alternate Bioremediation can be used to clear oil spills using number of microorganism either as individual culture or mixed culture. Genetic alteration these oil degrading microorganisms able to perform these tasks in a better manner.

SCREENING OF HPV IN HUMAN WITH DIFFERENT CANCERS:

For long period of time people tried to identify the etiological agent of oral cancer like cigarette, pipe, cigar smoking, heavy alcohol abuse, betel nut chewing and smokeless tobacco use. It seems to be unclear about the origin of oral cancer in Human, because the establishment of diseases is dependent on risk factors, like exposing skin to strong sunlight, genetic changes, tobacco and alcohol, diet and smokeless tobacco, areca nut, gender and biological factors including Viruses, Bacteria and some fungi. So there is an urgent need to establish a concrete idea about relationship of diseases with etiological agents.

In the present approach it will be aimed at investigating the presence of High risk HPVs in the patients suffering with oral cancer and evaluate their prevalence with different conditions like HIV, mal nutrition, people using different tobacco materials and alcoholics using highly sensitive type specific PCR Etc., and it also will be focused to assess the mode of viral transmission in human. It's also important to find out some means to control the disease.

PUBLICATIONS:

1. Murugan.A, Saravanan Babu, Elisheba and Sundararajan. 2003. Study on Monochrotophos pesticide degradation using the native strain isolated from soil sample. Indian journal of Applied Microbiology.3 (1): 63-65.

2. Murugan.A, P. Iyappan , S.Saravanan Babu, K. Sekar and J. Stephen. 2005. Study on Biodegradation of Pharmaceutical waste containing Benzene and Toluene .Pollution Research. 24 (1): 279-282