



MULTIPLEX PCR PRIMERS FOR FOWL ONCOGENIC VIRUSES

TECHNOLOGY AVAILABLE FOR TRANSFER

UNMET NEED AND OPPORTUNITY

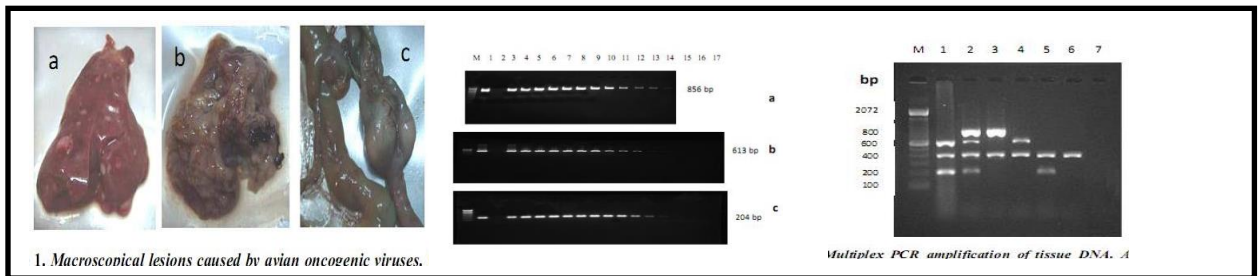
- Fowl oncogenic viruses are considered significant pathogens of poultry, with huge economic significance to the poultry industry.
- The fowl oncogenic viruses include one herpesvirus, the Marek's disease virus (MDV) and three retroviruses consisting of avian leukosis virus (ALV) (Subgroups A-I), Avian leukosis virus subgroup J (ALV-J) and Reticuloendotheliosis virus (REV).
- The laboratory classical differential diagnosis assays are based on virus isolation, demonstration of specific antibodies and histopathological examination of tumor tissues. However, these assays are laborious, time consuming, discrete and not useful for identification mixed infection prevalent in the field condition.
- PCR appears to be the method of choice for the diagnosis of avian oncogenic viruses because it overcomes many of the challenges encountered in the differential diagnosis and enables the simultaneous detection of multiple viral infections. Hence, a rapid, simple and precise single PCR reaction for diagnosis of all fowl oncogenic viruses is the need of the hour.

UNIQUE SELLING PROPOSITION

- In comparison with time consuming virus isolation and other molecular techniques, this multiplex PCR is simple, robust and can simultaneously diagnose all fowl oncogenic viruses in single reaction.
- This primer set is useful for detecting dual and multiple fowl oncogenic viral infections.
- It is possible to identify the common prevalent subgroups such as A, B and E in a single multiplex PCR reaction.
- In this assay, internal control of β actin primer is included for amplification of chicken DNA to confirm false positive reaction due to PCR contamination.

TECHNOLOGY

- DNA isolation of suspected tissue samples using routine molecular laboratory.
- Multiplex PCR for MDV, ALV subgroups, REV and beta actin (internal control for chicken tissue) using isolated DNA samples.



STAGE OF DEVELOPMENT

- Ready for scale up as per industry requirement.

LICENSING OPPORTUNITY

BCIL is looking for suitable industrial partner for commercialization of this multiplex PCR for delivery of avian diagnostics.

INTELLECTUAL PROPERTY

- Patent granted in India

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