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Development of A SYBER Green Real-Time

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Abstract:
Swine viral diseases are of great concern as they hamper the economy of the swine industry. One of such major disease problem is porcine parvovirus (PPV) infection cause reproductive failures in swine. Porcine parvovirus is an autonomously replicating parvovirus, belongs to genus parvovirus from the parvoviridae family. Qualitative real time PCR is a method to rapidly and precisely detect and quantify gene of interest. In the present study we have developed an assay based on real time PCR for the screening of porcine parvovirus in t issue DNA samples. The melting temperature was determined to be 76.5 oC for specific amplification which was further confirmed by sequencing of amplicon. The analytical sensitivity of the assay was determined to be 08 copies per 4x10-5 pg/ µl of standard plasmid clone of VP-2 gene. In spiking experiment with PPV negative pig genomic DNA of varying quantity, the present SYBR Green qPCR was evaluated 1000 times more sensitive than the conventional PCR. Therefore we propose this SYBR Green based qPCR assay as an alternate test for routine diagnosis of PPV due to higher sensitivity and rapidity which further rule out the chances of cross contamination during post PCR procedure

Biography:

Laxmi Kant Pandey, completed Ph.D. research work on “Variability on the capsid surface of type A foot-and mouth disease virus passaged in vitro under neutralizing antibody pressure” at PD on FMD, Mukteshwar. I have completed my Master of Science (M.Sc.) in Biotechnology in Aug’. My post-graduation work was on “Molecular Diagnosis of Porcine parvovirus (PPV) infection and Cloning, Sequencing & Expression of VP-2 gene of PPV” at High Security Animal Disease Laboratory (HSADL), India (with BSL-3 laboratory facility). I published more than 20 international research articles and I am having h-index of 8.

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