

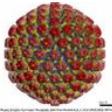
**Year 2014-2015**

**Title: Screening of cattle and buffalo breeding bulls of Haryana for Bovine Herpes Virus 1 infections**

**RKVY Scheme no. (4028 C (g) ABT-70A (RKVY))**

**Total budget: 40.00 lakhs**

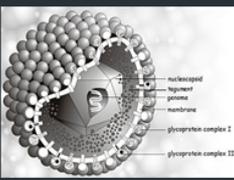
Some salient achievements are shown below:



**Screening of cattle and buffalo breeding bulls of Haryana for Bovine Herpes Virus 1 infections**

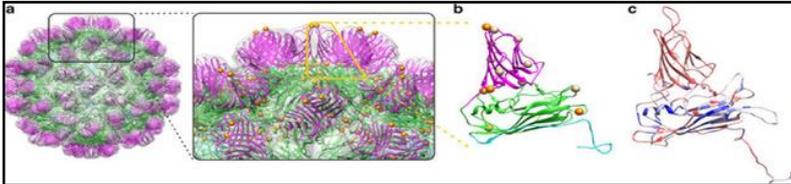


<p><b>Principal Investigator:</b></p> <p><b>Dr. Sushila Maan</b>                  Research Officer                  Department of ABT                  LUVAS, Hisar</p>	<p><b>Co-Investigators:</b></p> <ul style="list-style-type: none"> <li>• Dr. T. Nanda, Professor, ABT,</li> <li>• Dr. N.K. Mahajan, Professor, VPHE</li> <li>• Dr. N.S. Maan, Scientist, AN, Resource faculty ABT</li> <li>• Dr. Aman Kumar, ARO, ABT</li> </ul>
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**Rationale**

- BHV-1 is an emerging concern which has the potentiality to cripple the livestock industry. The available prophylactic strategies have their own limitations to develop a holistic control program against this transboundary pathogen.
- In-depth research with practical and implementable outcome is necessary to effectively tackle this pathogen which is slowly but deceptively spreading among our livestock population.



### Objectives:

- Collection of samples.
- Standardisation of methods for isolation of nucleic acids from semen/blood/other relevant samples.
- Amplification of BoHV-1 viral genes from semen/blood/other samples using various molecular techniques namely PCR and real time PCR.
- Sequencing of the amplified viral genes to confirm PCR results.

### Research Highlightes

- More than 250 samples from different parts of Haryana and semen samples from various semen banks of Haryana were tested for the presence of BoHV-1 and an income of 2 lakhs has been generated.
- Five isolates of BoHV-1 have been generated in MDBK cell line for further research work.
- Conventional and real time monoplex BoHV-1 specific PCR have been developed and validated using field samples and published.
- Triplex PCR of abortogenic pathogens including BoHV-1 has been developed.
- BoHV-1 isolates have been confirmed by sequencing.

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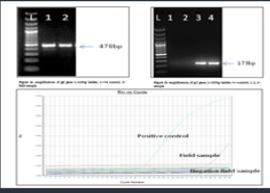
**Research Article**

**PCR Based Screening of Bulls for BoHV-1 Infection in Haryana**

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### Physical achievements:

### Technology developed:

- ❖ PCR assay has been developed and evaluated based on four different genes (gB, gC, gD, and gE) of the virus.
- ❖ Conventional and real time monoplex and multiplex PCRs assays have been developed for IBR and published.
- ❖ A triplex real time PCR have been developed for three abortogenic pathogens.

- ❖ Five IBR isolates have been generated in MDBK cell line from recent samples which can be used for further research and development of vaccines.

**Facilities generated:**

Purchased Lyophilizer with accessories for storage of reagents and pathogens.

**Beneficiaries:**

1. Livestock farmers of different communities.
2. State Animal Husbandry Department and Semen banks managed by Haryana Livestock Development Board (HLDB).