

International Training program- Organized a four-days training program on 'banana virus indexing' and 'genetic fidelity testing in tissue-cultured banana plants', for 13 African candidates from July 23 to 26, 2018; funded by Biotech Consortium India Ltd. (BCIL), New Delhi. BCIL is an organization created by Dept. of Biotechnology, New Delhi, Gol.

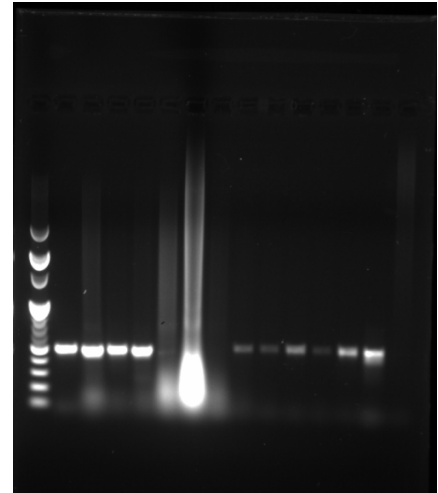
## **A REPORT**

On

### **Training Program of African Candidates Molecular Techniques for Virus Indexing & Clonal Fidelity (July 23-26, 2018)**

School of Studies in Biotechnology of Pt. Ravishankar Shukla University, Raipur organized a four-days training program for African candidates. The program was scheduled from July 23<sup>rd</sup> to 26<sup>th</sup> 2018. On the first day of the program, the candidates interacted with Prof KL Verma, the Vice-Chancellor of the host University. Further, the program was carried forward by Dr Afaque Quraishi, Coordinator of the training program. An orientation lecture on DNA extraction and purification was given by the respective speaker. Moreover, a briefing was conducted for the participants for their hands-on training on DNA isolation and quantification. Initially, the candidates visited the field for visual identification of BBTV infected banana plants. Then, the candidates performed extraction of DNA from banana plants to diagnose the Banana Bunchy Top Disease following the amplification of extracted DNA via PCR technique. On the second day of the program, the participants performed the PCR and electrophoresis of the PCR amplicons for BBTV indexing. In the second-half of second day, Dr Afaque Quraishi delivered a presentation about PCR, its function, advantages and its application. After that, the participants were trained to observe the bands in electrophoresis gel through a gel documentation system for BBTV indexing (Figure 1).

Figure 1: BBTV indexing via PCR, the band near 500 bp shows the amplicons for BBTV coat protein gene.



The next day, participants performed the experiments for clonal fidelity of *in vitro* cultured banana plantlets. The ISSR markers were used for accessing genetic fidelity of micropropagated banana plantlets via PCR. A thorough presentation for primer designing was also delivered in the same session. After completion of the session, the African candidates interacted with the post- graduate students of the host department and share the scientific knowledge with them. In the last day of training, the African participants performed the electrophoresis of amplicons and observed the genetic integrity of the micropropagated banana plantlets with their mother-plants (Figure 2). At the last session, the African participants interacted with the Head, faculties, and students of the host department and share their feedback about the training program.

Figure 2: Image showing the genetic integrity of *in vitro* cultured banana plantlets with their mother-plants by using 2 different ISSR markers.

