

Towards the development of transgenic plants, PCCT section has developed transgenic approaches to confer resistance against biotic and abiotic stress and iron biofortification in banana.

- *NAC* transcription factors from banana have been cloned and characterized for their functions in secondary wall deposition, drought and salinity tolerance.
- Promoters for tissue specific and stress inducible expression have been identified and characterized for their utility in genetic engineering of banana plants towards improved stress tolerance.

Novel genes for genetic improvement of Banana plants

Crop	Gene	Trait
Banana	<i>Trichoderma Sm1</i> , <i>Foc SIX</i> genes, <i>MusaLOXIA</i> (Genome editing)	Fusarium wilt resistance
	ihpRNA of replication initiation protein of BBTV	BBTV resistance
	Native transcription factor of <i>WRKY</i> , <i>NAC</i> , <i>DREB</i> families	Salinity and drought tolerance
	CRISPR-Cas9 mediated genome editing of <i>SNAC67</i> transcription factor	Reduced stress induced senescence
	CRISPR-Cas9 mediated genome editing of native <i>LOXIA</i> , <i>VND2</i> , <i>VND6</i> and <i>VND7</i>	Fusarium wilt resistance

