



**Centre 9: ICAR-DIRECTORATE OF ONION AND GARLIC RESEARCH,
RAJGURUNAGAR**


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Number of research projects being handled at present	:	One	


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Number of research projects being handled at present	:	One	

Manpower

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Objectives:

1) **Prevention and outbreak response/intervention**

- i) To express chimeric r-PB antigen in plant system for scalable production of vaccine
- ii) To evaluate plant expressed chimeric PAbxpB for vaccine potential

Role in A-INP Network

A bivalent sub-unit vaccine candidate r-PB encompassing the domain IV of PA and C terminal domain (CTD) of BclA is proven to provide protective immunity against *B. anthracis* infection in murine model. The r-PB protein will be expressed in tobacco and onion for scalable production of vaccine candidate. The expression involves codon optimization for plant specific expression, cloning in plant transformation vector and evaluation of vector construct by transient assay for functional expression. Then the chimeric gene construct will be expressed in onion in stable transgenic plants. The immunogenic potential will be evaluated along with bacterial expressed protein. Further protein stability will be evaluated immediately after harvest and also during storage of onion