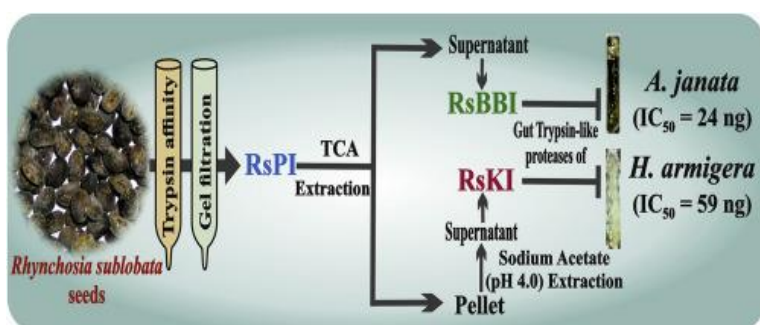




## Application of plant protease inhibitors as biological control agents of insect pests, *Achaea janata* and *Helicoverpa armigera* (Patent no. 202141017396)

**Inventors:** Mariyamma Gujjarlapudi, Bharti Kotarya, MK Arunasree & Kollipara Padmasree, School of Life Sciences, UoH

In present patented technology, scientists from the University of Hyderabad extracted trypsin-specific protease inhibitors (PIs) from *Rhynchosia sublobata* seeds which showed pesticide characteristics against *Achaea janata* and *Helicoverpa armigera*. The investigators extracted Bowman-Birk inhibitors (BBIs) and Kunitz inhibitors from the *R. sublobata* seeds. These PIs have 2 and 1 trypsin-specific reactive sites respectively that defend the gut trypsin-like proteases of both *A. janata* and *H. armigera*, and protect the plant from further harm. The major advantages of these compounds are less toxicity and easy availability due to their biological



resource. In summary, *R. sublobata* seeds can be promising biomolecules in the management of *A. janata* and *H. armigera* insects. Commercialization of this method will be beneficial in the field of agriculture.