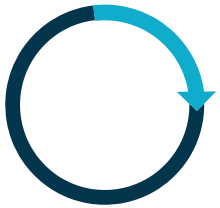
PRODUCTION TECHNOLOGY

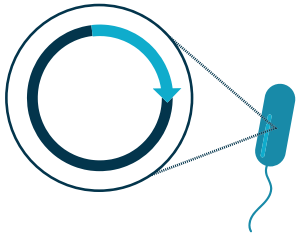
1. GENE SOURCING AND EDITING

We acquire gene sequences for each specific protein of interest, these are digital sequences of DNA, much like computer code. These gene sequences are then modified in silico for different applications.



2. CLONING

Digital DNA is synthesized into physical DNA and cloned into our high expressing pCBP plant expression vectors.

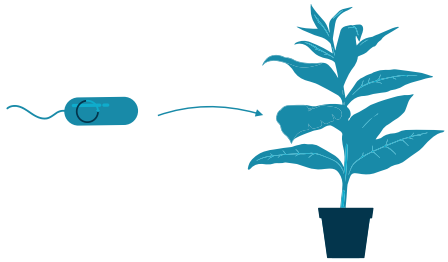


3. BACTERIAL TRANSFORMATION

Expression vectors containing the gene of interest are inserted into *Agrobacterium* bacterium.

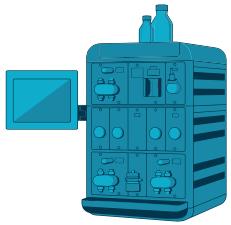
4. INFILTRATION

Plants are infiltrated with a solution of transformed bacteria, which have the natural ability to deliver the expression vectors into the cells of plants.



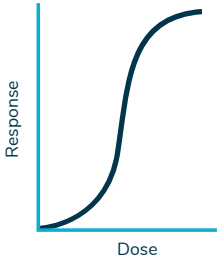
5. PROTEIN EXPRESSION

As soon as the vector has gained entry into the cells, it hijacks the plant's natural protein-making machinery to produce large amounts of the protein of interest. Each plant can be seen as a 'mini-bioreactor'. A week after infiltration (times vary with each protein), we harvest the leaves of infected plants.



6. PURIFICATION

We then separate our protein of interest from contaminating native plant proteins using rounds of filtration and chromatography to achieve the highest levels of purity.



7. QUALITY TESTING

Each batch is subject to stringent quality controls to ensure reproducibility in purity, functionality, and performance.

8. RECOMBINANT PROTEIN

Once our products pass their quality test they are formulated and filled as their final product, ready to be used in multiple life sciences applications.