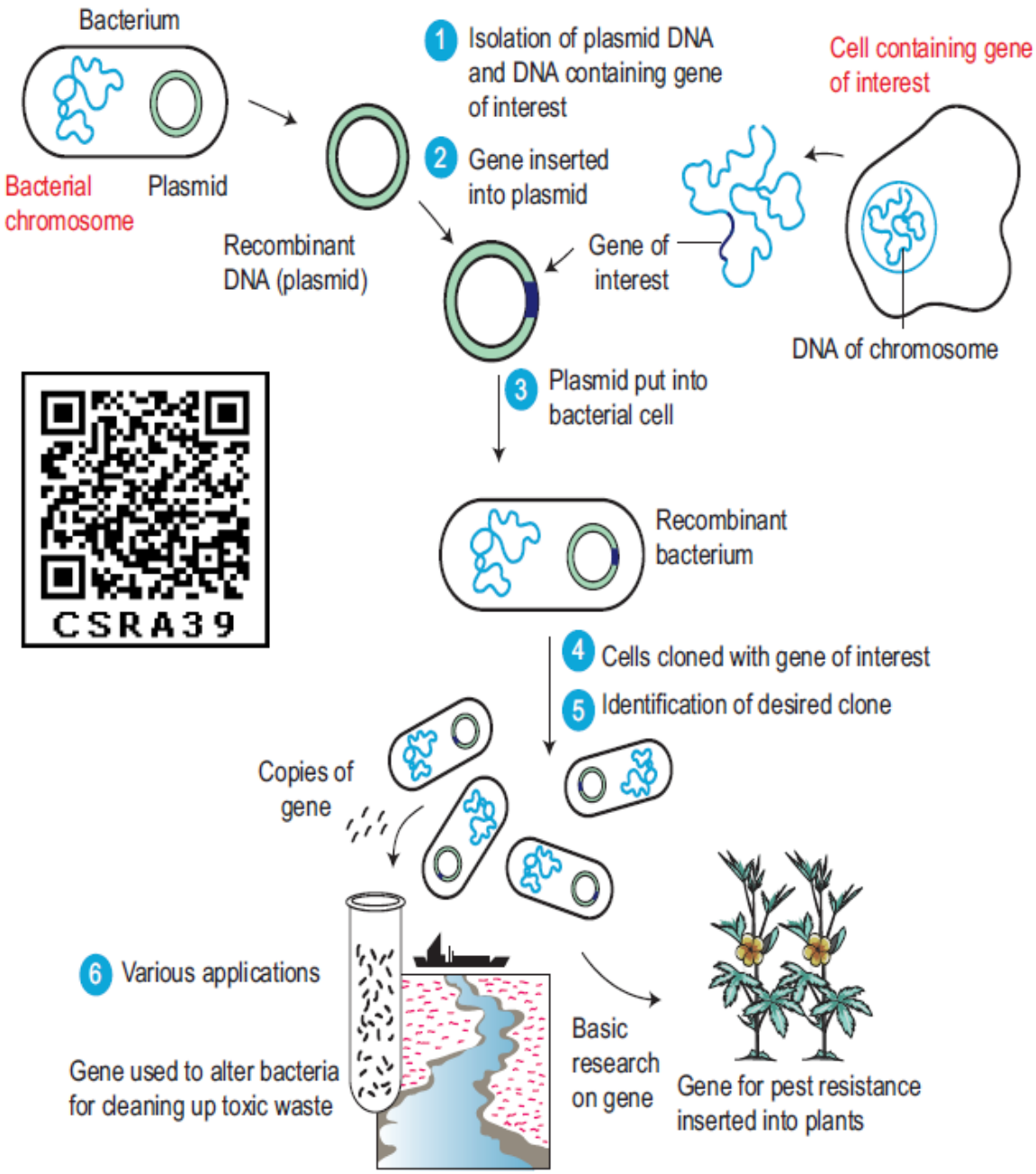
Steps involved in Recombinant DNA Technology

The steps involved in recombinant DNA technology are:

- Isolation of a DNA fragment containing a gene of interest that needs to be cloned. This is called an **insert**.
- Generation of recombinant DNA (rDNA) molecule by insertion of the DNA fragment into a carrier molecule called a **vector** that can self-replicate within the host cell.
- Selection of the transformed host cells that is carrying the rDNA and allowing them to multiply thereby multiplying the rDNA molecule.
- The entire process thus generates either a large amount of rDNA or a large amount of protein expressed by the insert.
- Wherever vectors are not involved the desired gene is multiplied by PCR technique. The multiple copies are injected into the host cell protoplast or it is shot into the host cell protoplast by shot gun method.



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PCR: Polymerase Chain Reaction is a common laboratory technique used to make copies (millions) of a particular region of DNA.