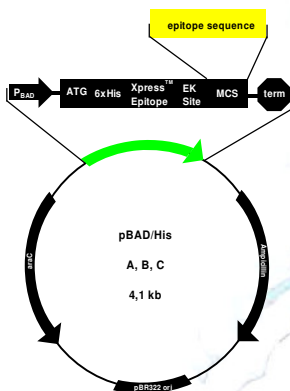


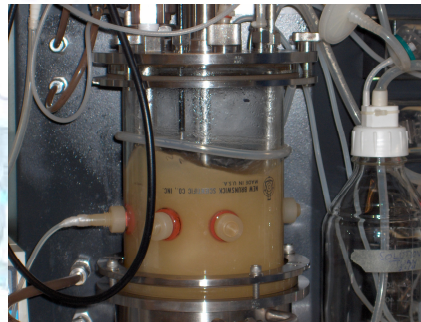
## Production of proteins

### From DNA sequence to product

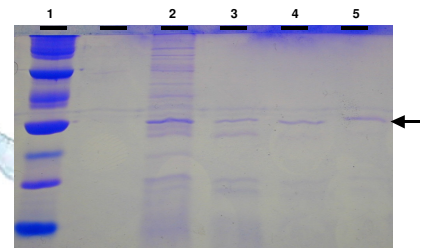
The HAN BioCentre has extensive experience in the production of (heterologous) proteins in both prokaryotic and eukaryotic systems. The figure below illustrates the production of a protein fragment by *E.coli*, as successfully carried out within the HAN BioCentre.



cloning, transformation and selection



production in fermentation



LANE	
1	MARKER
2	CEL EXTRACT
3	WASH
4	ELUTIE 1
5	ELUTIE 2

PAGE after Ni-column purification

Positive transformants are selected and then cultured in the fermenter. HAN BioCentre has a number of bioreactors (up to 14 litres), which enable proteins or biomolecules to be optimally produced under controlled production conditions. HAN BioCentre's experience with small-scale purifications (*e.g.* microfiltration, ultrafiltration and column chromatography) makes it an interesting partner for the production of small quantities of product during initial application tests.

The HAN BioCentre also has experience with other production organisms, including: lactic acid bacteria, eukaryotic expression systems, such as yeast, *Aspergillus* and other fungi, and baculovirus.

The HAN BioCentre offers:

- Expertise with all modern recombinant DNA technologies:
  - production of DNA constructs and expression vectors
  - gene-expression studies
- Generation, selection and testing of optimal production strains.
- Production and purification of proteins for small-scale application tests, in fermenters and the determination of optimal production conditions.