



### **Position statement of the ZKBS on introducing mRNA into eukaryotic cells**

Over the last 20 years or so, mRNAs have been introduced into the cytoplasm of eukaryotic cells, particularly oocytes of *Xenopus laevis* for the purpose of translation (Heikkila, 1989). Already mRNAs of many different organisms (plants, insects, fish, amphibians, birds and mammals) have been used.

Eukaryotic mRNAs do not comprise inherited genetic material. Following injection into the cytoplasm of *Xenopus* oocytes or somatic eukaryotic cells the eukaryotic mRNAs are merely translated; reverse transcription of mRNAs and integration into the genome does neither happen in *Xenopus* oocytes nor in somatic eukaryotic cells. Such operations are therefore not procedures for modifying genetic material.

This position statement does not apply to operations that are expected to lead to the generation of genetically modified viruses, such as the injection of recombinant genomes of RNA viruses (e.g. from picornaviruses) into somatic eukaryotic cells or the production of recombinant Semliki Forest viruses.