



Stichting Business  
Generator Groningen



## Licensing Opportunity

### VBEx cloning system

#### Technology

The inventors developed a generic method for high-throughput cloning in expression hosts that are not well accessible by conventional DNA manipulations. The method enables the use of established high-throughput cloning techniques for inserting a sequence in an intermediary *Escherichia coli* vector, which is then rapidly converted via Vector-Backbone Exchange (VBEx) into a plasmid specific for the expression host. This plasmid is ready for high-efficiency transformation.

The effectiveness of the system has been demonstrated for *Lactococcus lactis*, but it can easily be adapted to other expression hosts and alternative high-throughput cloning procedures.

The technique is ready to be applied and only requires standard laboratory equipment.

#### Business Opportunity

The expression of membrane proteins and large multidomain assemblies is often problematic, but nevertheless screening is mainly limited to the well-established expression hosts *Escherichia coli* and yeast. The VBEx cloning system now facilitates the use of alternative expression hosts and thus allows a rapid and broader screen of expression systems to overcome the major hurdle of protein production.

The VBEx cloning system can be sold as a cloning and expression kit to pharmaceutical companies, biotech companies and research institutes.

#### The Market

The VBEx cloning system as a cloning kit has high market potential, as membrane proteins and multidomain protein assemblies are frequently studied as drug targets (e.g. membrane receptors and ion channels).

The VBEx cloning system offers the possibility to use alternative expression hosts. This gives additional possibilities for protein production and drug development.

Furthermore, the time saving aspect can be of great importance in the biotechnology and pharmaceutical industry that aims at a short lead time for product development.

#### Investment Opportunity

A patent application has been filed and SBGG is now seeking partners to discuss the exploitation of the VBEx cloning system.

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#### Company information:

SBGG is the technology transfer office of University of Groningen / University Medical Centre (the Netherlands)

#### Patent information:

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#### Development Status:

Product ready to use

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