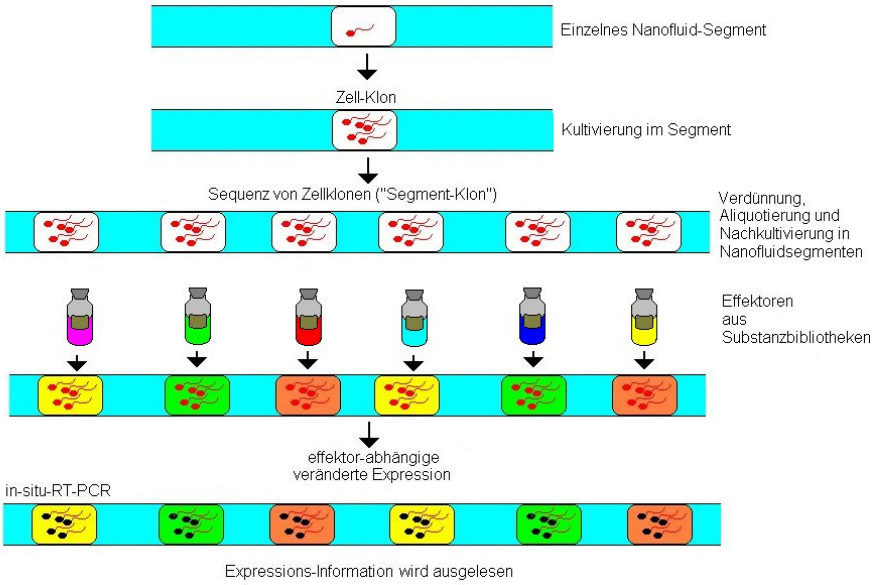
Topic: Drug Screening

The search for new drugs for medical therapies and the need of improved application of known drugs demand for new and efficient methods for drug screening. More cost-efficient, but powerful assays and screening strategies are needed in the evaluation of action, compatibility and toxicology of drugs as well as for finding, evaluation and modification of new drugs.

The easy handling of large series of smallest sample volumes makes the segmented-flow technique to one of the most promising techniques for future drug research. Beside this general handling advantages, this technique allows both the handling and cultivation of cells for biological assays, of biomolecules for analyzing genomes, transcriptomes and proteomes and for the handling of reactants for chemical synthesis and analysis.
Applications are, for example:

- development of antibiotics,
- combinatorial organic synthesis for drug development,
- screening of drugs obtained from cell cultivation or synthesized by microorganisms,
- toxicological screenings,
- tissue-dependent investigation of influences on gene expression,
- investigation of synergistic effects for drug combinations,
- drug development for individualized medicine.



Scheme: principle of a drug screening using the microsegmented flow

Source/Author/Date*:*

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