

1 *Cultivation of bacteria*

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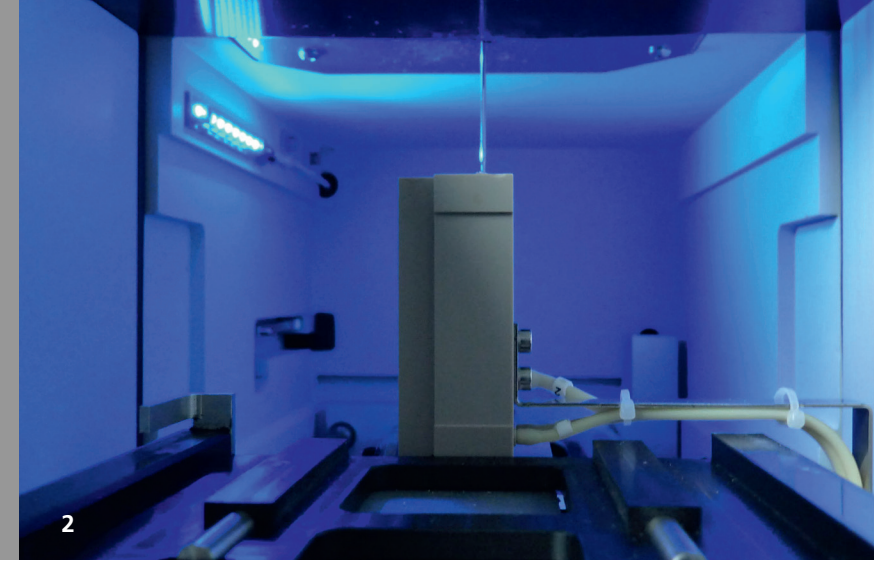
2 *QTRAP LC-MS/MS System for the analysis of peptides and metabolites* © Fraunhofer IME / Sebastian de Vries.

INDUSTRIAL BIOTECHNOLOGY

- Development of biofuels and bio-chemical concepts
- Metabolic engineering of microorganisms (including metabolomics and flux analysis)
- Synthesis gas fermentation
- Classical strain development of aerobic and anaerobic microorganisms (genome shuffling, chemical mutagenesis and high-throughput-screening)
- LC-MS/MS and GC-MS/MS analysis, including targeted proteomics and metabolomics
- Phytochemistry and natural product analysis, in particular of terpenes including cytochrome P450 monooxygenases
- Working with radioisotopes (^{14}C , ^3H , ^{32}P) for the elucidation of metabolic pathways and importer/exporter studies
- Screening for novel biocatalysts based on quorum sensing quenching
- Development of tailor-made biocatalysts using guided protein evolution

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CONTACT CONTRACT SERVICES

1 Pipetting robot

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2 Surface plasmon resonance

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Assay development for high-content screening

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DNA sequencing / DNA fragment analysis

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Metabolic engineering and natural products

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Flow cytometry analysis and cell sorting

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Generation and production of monoclonal antibodies

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Biacore interaction analysis (SPR)

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Bioprocess development

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Recombinant protein production

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