Research outputs:

A synbio approach for selection of highly expressed gene variants in Gram-positive bacteria
Research output: Research - peer-review › Journal article – Annual report year: 2018

BacHBerry:: BACterial Hosts for production of Bioactive phenolics from bERRY fruits
Research output: Research - peer-review › Journal article – Annual report year: 2018

Bacterial Genome Editing Strategy for Control of Transcription and Protein Stability
Research output: Research - peer-review › Book chapter – Annual report year: 2018

Selection of Highly Expressed Gene Variants in Escherichia coli Using Translationally Coupled Antibiotic Selection Markers
Research output: Research - peer-review › Book chapter – Annual report year: 2018

Standardized Cloning and Curing of Plasmids
Research output: Research - peer-review › Book chapter – Annual report year: 2018

TARSyn: Tunable Antibiotic Resistance Devices Enabling Bacterial Synthetic Evolution and Protein Production
Research output: Research - peer-review › Journal article – Annual report year: 2018

A Modular High-Throughput In Vivo Screening Platform Based on Chimeric Bacterial Receptors
Research output: Research - peer-review › Journal article – Annual report year: 2017

An expression tag toolbox for microbial production of membrane bound plant cytochromes P450
Research output: Research - peer-review › Journal article – Annual report year: 2016

A versatile one-step CRISPR-Cas9 based approach to plasmid-curing
Research output: Research - peer-review › Journal article – Annual report year: 2017

CRISPR/Cas9-based genome editing for simultaneous interference with gene expression and protein stability
Research output: Research - peer-review › Journal article – Annual report year: 2017

De-bugging and maximizing plant cytochrome P450 production in Escherichia coli with C-terminal GFP fusions
Research output: Research - peer-review › Journal article – Annual report year: 2017
Increasing the permeability of Escherichia coli using MAC13243
Research output: Research - peer-review › Journal article – Annual report year: 2017

Isolation and characterization of the E. coli membrane protein production strain Mutant56(DE3)
Research output: Research - peer-review › Journal article – Annual report year: 2017

Synthetic biology approaches for protein production optimization in bacterial cell factories
Research output: Research › Ph.D. thesis – Annual report year: 2018

The CYP79A1 catalyzed conversion of tyrosine to (E)-p-hydroxyphenylacetaldoxime unravelled using an improved method for homology modeling
Research output: Research - peer-review › Journal article – Annual report year: 2017

A nanobody:GFP bacterial platform that enables functional enzyme display and easy quantification of display capacity
Research output: Research - peer-review › Journal article – Annual report year: 2016

Codon optimizing for increased membrane protein production: a minimalist approach
Research output: Research - peer-review › Book chapter – Annual report year: 2016

Evolution and Engineering in Escherichia coli

Generation of mutation hotspots in ageing bacterial colonies
Research output: Research › Working paper – Annual report year: 2016

Generation of mutation hotspots in ageing bacterial colonies
Research output: Research - peer-review › Journal article – Annual report year: 2016

Improvement of Synthetic Biology Tools for DNA Editing

Protein and DNA technologies for functional expression of membrane-associated cytochromes P450 in bacterial cell factories

SEVA Linkers: A Versatile and Automatable DNA Backbone Exchange Standard for Synthetic Biology
Research output: Research - peer-review › Journal article – Annual report year: 2016

Side effects of extra tRNA supplied in a typical bacterial protein production scenario
Research output: Research - peer-review › Journal article – Annual report year: 2016

Stereo-specific synthesis of (13r)-manoyl oxide
Research output: Research › Patent – Annual report year: 2015

Accurate Dna Assembly And Direct Genome Integration With Optimized Uracil Excision Cloning To Facilitate Engineering Of Escherichia Coli As A Cell Factory
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2015

Accurate DNA assembly and genome engineering with optimized uracil excision cloning
Research output: Research - peer-review › Journal article – Annual report year: 2015
An Antibiotic Selection System For Protein Overproducing Bacteria
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2015

Assembly of Highly Standardized Gene Fragments for High-Level Production of Porphyrins in E. coli
Research output: Research - peer-review › Journal article – Annual report year: 2014

Conditional protein depletion using small degradation tags and CRISPR/Cas9 systems
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2015

Enhanced Protein Production in Escherichia coli by Optimization of Cloning Scars at the Vector-Coding Sequence Junction
Research output: Research - peer-review › Journal article – Annual report year: 2015

Expanding the N-terminal tag toolbox for functional expression of Cytochrome P450s in cell factories
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2015

Exploring Marine Environments To Unravel Tolerance Mechanisms To Relevant Compounds
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2015

Improved premises for cell factory development: An enhanced understanding of established microbial protein production systems

Superlinkers – A versatile and automatable DNA backbone exchange standard for synthetic biology
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2016

Uracil Excision for Assembly of Complex Pathways
Research output: Research - peer-review › Book chapter – Annual report year: 2015

‘Forcing the issue’ - Aromatic tuning facilitates stimulus-independent modulation of a two-component signaling circuit
Research output: Research - peer-review › Journal article – Annual report year: 2014

Microbial Synthesis of the Forskolin Precursor Manoyl Oxide in an Enantiomerically Pure Form
Research output: Research - peer-review › Journal article – Annual report year: 2014

Synthetic Biology Tools for the Membrane – Targeted Localisation and Elucidation of Protein Interactions
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2014

Improved production of membrane proteins in Escherichia coli by selective codon substitutions
Research output: Research - peer-review › Journal article – Annual report year: 2013

Application of split-green fluorescent protein for topology mapping membrane proteins in Escherichia coli
Research output: Research - peer-review › Journal article – Annual report year: 2012

Projects:

Biosensor development and next-generation sequencing approaches for studying molecular evolution in bacteria
Project: PhD

Harnessing the Oxidative Power of Enzymes
Project: PhD
Rewiring the bacterial genome by retromutagenesis for tolerance development in microbial cell factories
Project: PhD

Microbial Enzyme Production
Project: PhD

Inducible growth decoupling systems for improved production of biochemicals
Project: PhD

Biosensor development and next-generation sequencing approaches for studying molecular evolution in bacteria
Project: PhD

Synthetic Biology tools Development for Protein engineering and study of adaptive evolution in Bacteria
Project: PhD

Genome engineering, reprogramming and evolution of yeast-based cell factories
Project: PhD

Development of genome editing tools and identification of targets for CHO cell factory engineering
Project: PhD

Split-protein technologies
Project: PhD

Platform for cytochrome P450 reductases for optimized sustainable production of high value compounds in Escherichia coli
Project: PhD

Aptamer Biosensor Arrays for Metabolic Engineering
Project: PhD

Decouple Growth from Central Metabolism in order to Control Growth during Production of Biochemicals
Project: PhD

Development of a bacterial platform for sustainable production of fine chemicals
Project: PhD

Standardization of DNA Vector Design-Processes
Project: PhD

Mixed Community Bioactives
Project: PhD

Generate Prototype Expression Platforms for Membrane Integrated Enzymes in E. coli
Project: PhD

A novel method for optimization of cell factories and increased inhibitor-tolerance by CHIP-MAGE—a novel method for modulating the expression level of multiple targeted genes in cell libraries
Project: PhD
Microbial platform for expression of membrane integrated enzymes and sustainable production of high value chemicals
Project: PhD

Biorefinery Training Platform: Bacterial Factories for Sustainable Chemical and Drug Production
Project: Research

Activities:

Biosustainable production in living cell factories
Activity: Talks and presentations › Conference presentations

From Molecular to Synthetic Biology
Activity: Talks and presentations › Conference presentations

Synbio2.0: engineering the evolution of living systems
Activity: Talks and presentations › Conference presentations

Synbio2.0: engineering the evolution of living systems
Activity: Talks and presentations › Conference presentations

The CRISPR revolution
Activity: Talks and presentations › Conference presentations