



General and Applied Microbiology

The lecture and the literature seminar:

- | | |
|---|-------------------|
| • Cytology and ecology of microorganisms | Hoppert |
| • Systematics & evolution | Stülke |
| • Metabolism | Stülke/ Daniel |
| • Molecular biology, gene regulation | Stülke/ Liesegang |
| • Phages | Friedrich |
| • Infection biology, medical microbiology | Rismondo |
| • Biotechnology/Metagenomics | Daniel |
| • Seminar | Rismondo/ Stülke |

daily 08.15 h

Start: 10/27



The literature seminar

You will present papers that are recommended by the teachers of the module (Liesegang, Hoppert, Friedrich, Rismondo, Daniel, Stülke)

Please contact a teacher of your choice for a paper, and then send the title to me (jstuelk@gwdg.de) no later than October 31!

The seminar will take place in presence.

Dates: 11/27, 11/28



Lab course: Enzymes for Biotechnology

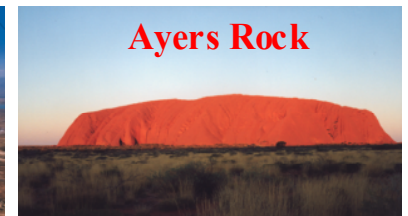
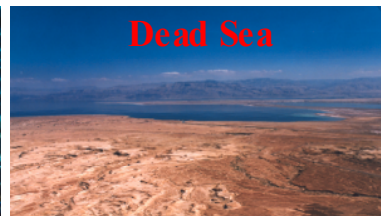
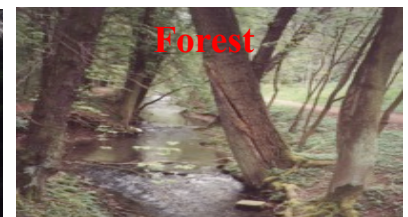
Start: October 27, 10 p.m. (after the lecture)

Supervisors: Prof. Daniel, Dr. Hoppert, Dr. Friedrich, Dr. Poehlein

Search for interesting enzymes from metagenomes

DNA sequencing and sequence analysis

Screens for biotechnologically relevant microorganisms
or important enzymes





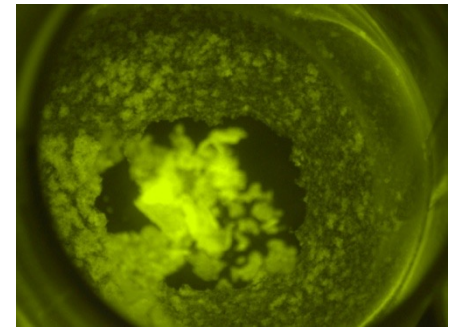
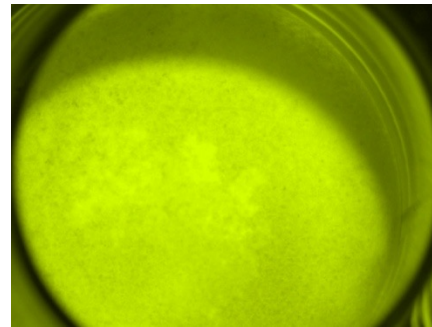
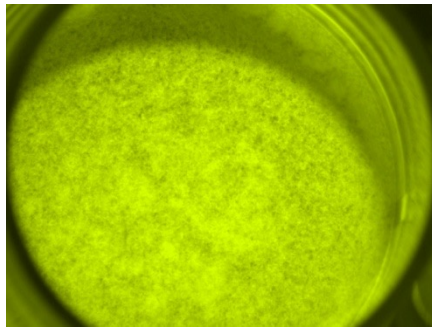
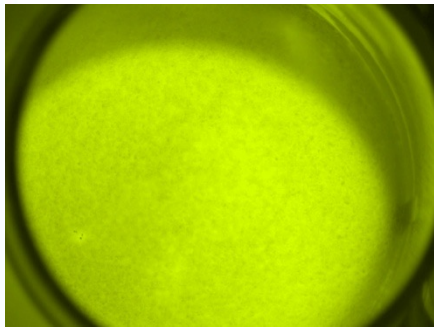
Lab course: Signal Transduction

Start: October 27, 10 a.m. (after the lecture)

Supervisors: Prof. Stülke, Dr. Rismondo

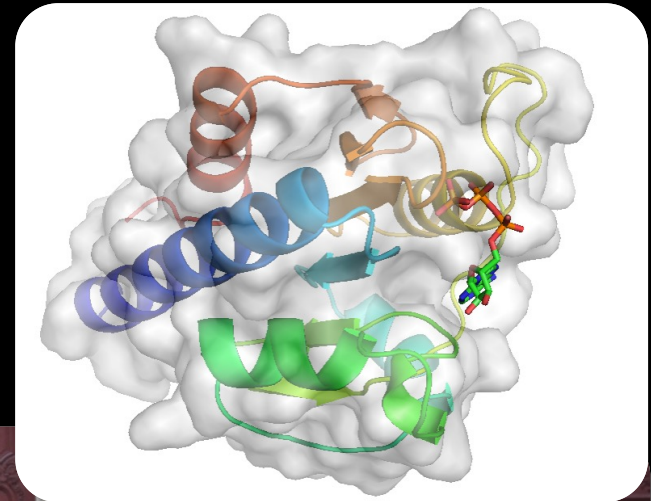
Regulation of amino acid homeostasis

Regulation of cell division



iGEM

International Genetically Engineered Machine Competition



iGEM

International Genetically Engineered Machine Competition





iGEM → noGEM

International Genetically Engineered Machine Competition

Group of students (6 ... 12)

December - February

Develop own project

January - March

Acquire independent funding

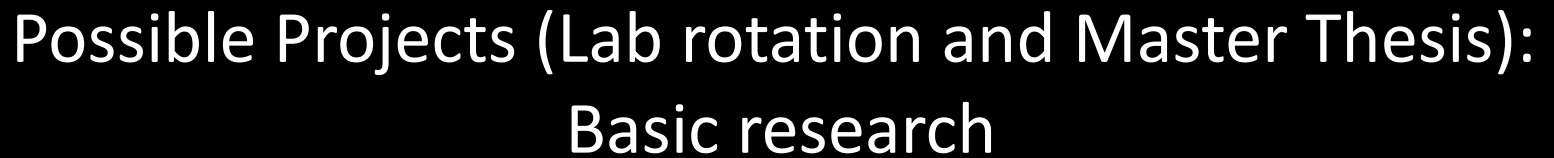
February - October

Put your project into reality

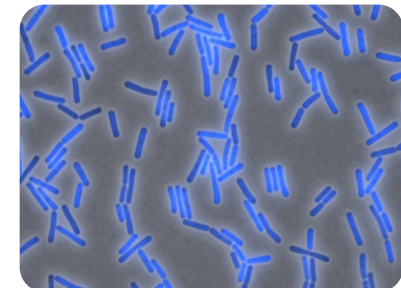
April - September

Present the project

October



Molecular mechanisms of evolution

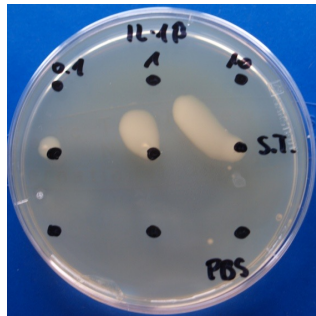




Possible Projects (Lab rotation and Master Thesis): Infection Biology & Medical Microbiology

Mycoplasma pneumoniae

Listeria monocytogenes



	dpi	HeLa cells	wt	<i>mpn420</i>
<i>Mycoplasma pneumoniae</i>	2			
	4			
	6			

Understanding of virulence mechanisms

How to overcome resistance mechanisms



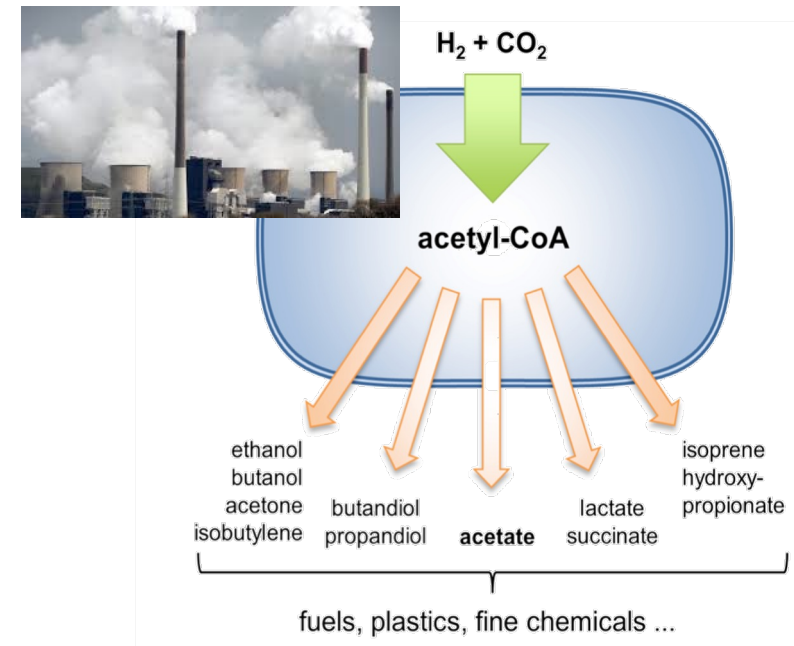
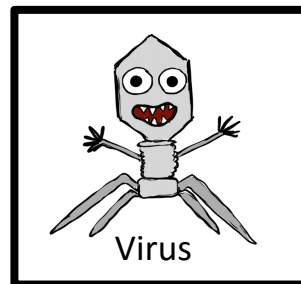
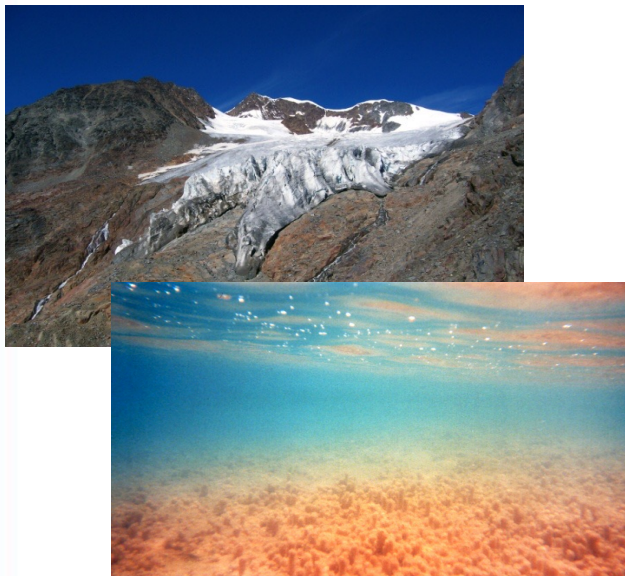
Possible Projects (Lab rotation and Master Thesis): Genomic and Applied Microbiology

Metagenomics: The quest for novel enzymes from unusual sources.

Characterization of microbial and viral communities

Genomics:

Isolation and Characterization of novel strains and viruses, genome sequencing and transcriptome analysis of communities, viruses or biotechnologically relevant microbes





For further information



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