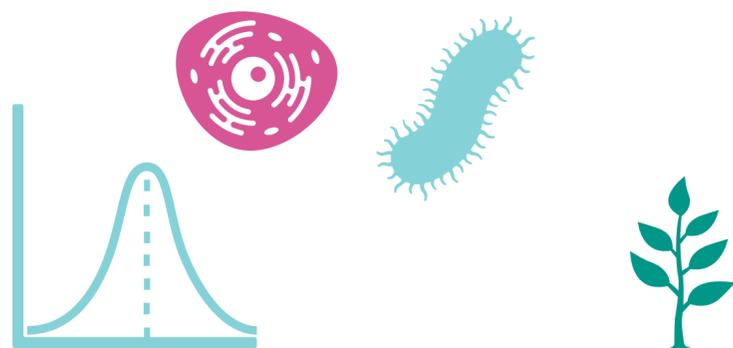


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# THE ESSENTIALS

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*Overview over the first weeks*



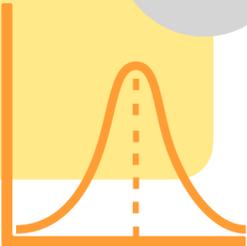
# GENERAL MASTER COURSES

The semester starts with **two compulsory courses**



**“LAB” METHODS**

**COMPUTATIONAL BIOLOGY**



online

# GENERAL MASTER COURSES

The semester starts with **two compulsory courses**



**Both courses are tightly linked!**

Together, you will learn **essential methods** required for molecular biology.

# GENERAL MASTER COURSES

The semester starts with **two compulsory courses**



**"LAB" METHODS**

**COMPUTATIONAL BIOLOGY**

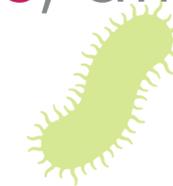


**Both courses are tightly linked!**

Together, you will learn **essential methods** required for molecular biology.



Different **model organisms**, different **molecules** & different **techniques**



**15.10 - 18.10**

Computational Course Part 1

A & B

**15.10 - 18.10**

Computational Course Part 1

A & B

Lab Course

A-1

Lab Course

A-2

Lab Course

A-3

**15.10 - 18.10**

Computational Course Part 1

**A & B**

**Lab Course**

**A-1**

**Lab Course**

**A-2**

**Lab Course**

**A-3**

**“free”  
Data Camp R**

**Group B - Computational Part 2**

**15.10 - 18.10**

**October 22.10 - November 08.11.**

Computational Course Part 1

**A & B**

Lab Course

A-1

Lab Course

A-2

Lab Course

A-3

“free”  
Data Camp R

Group B - Computational Part 2

**17.10 - 20.10**

Computational Course Part 1

A & B

**17.10 - 20.10**

**November 12.11. - November 28.11.**

Computational Course Part 1

A & B

**17.10 - 20.10**

**November 12.11. - November 28.11.**

Computational Course Part 1

A & B

Lab Course

B-1

Lab Course

B-2

Lab Course

B-3

Lab Course

B-4

**17.10 - 20.10**

**November 12.11. - November 28.11.**

Computational Course Part 1

A & B

“free”  
Data Camp R

Group A - Computational Part 2

Lab Course

B-1

Lab Course

B-2

Lab Course

B-3

Lab Course

B-4

**15.10 - 18.10**

**Group A - 22.10 - 08.11**

Computational Course Part 1

A & B

Danny Meilinger

**HUMANBIOLOGY MASTER**

**A-1**

Tamara Mikeladze-Dvali

**MOLECULAR & CELLULAR  
BIOLOGY MASTER**

**A-2**

Sonja Grath

**MOLECULAR & CELLULAR  
BIOLOGY MASTER**

**A-3**

**Group B - 12.11 - 29.11**

Dagmar Hann

**MOLECULAR & CELLULAR  
BIOLOGY  
&  
PLANT SCIENCE  
MASTER**

**B-1**

Benjamin Brandt

**MOLECULAR & CELLULAR  
BIOLOGY MASTER**

**B-2**

Joachim Surm

**MOLECULAR & CELLULAR  
BIOLOGY MASTER**

**B-3**

Frank Landgraf

**MOLECULAR & CELLULAR  
BIOLOGY MASTER**

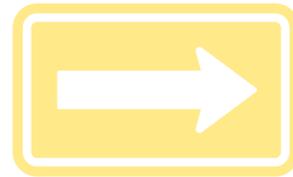
**B-4**

# COMPUTATIONAL COURSE - CONTENT & TOPICS

All information can be found on

**Moodle:**

[moodle -LMU](#)



You need to enrol yourself to  
the respective group:

***Sign in***  
***as soon as you get sorted in your group with the***  
***correct enrolment key!***

COMPUTATIONAL COURSE

**!!! IMPORTANT !!!**

**!!! IMPORTANT !!!**

**group specific task will be assigned  
within MOODLE**

*sign in **as soon as you get sorted in your group** with the correct enrolment key!*

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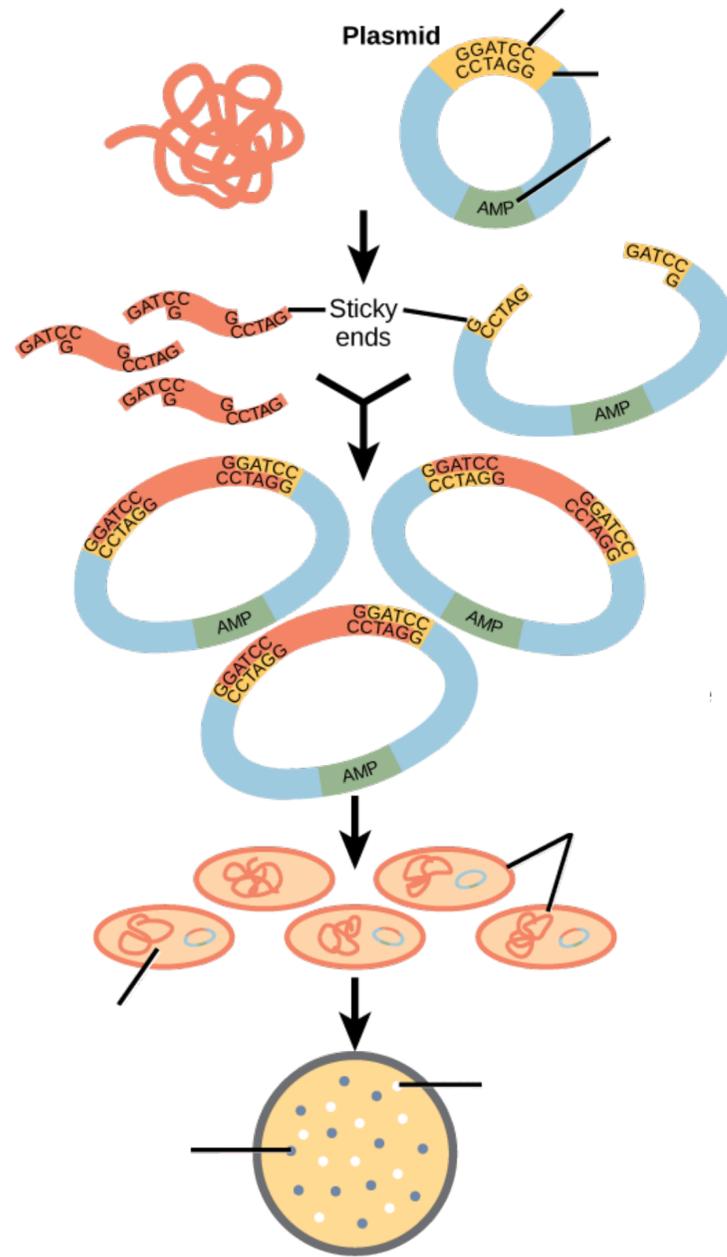
**Data Camp HAS to be completed  
before R-Module !!!**

*information about Data Camp on moodle!*

# LAB COURSE - CONTENT & TOPICS

## The Essentials Methods in molecular and cellular Biology

### PCNA



- Transfection of different cell and tissue types
- Co-IP
- Fluorescence Microscopy

Investigate function of **PCNA** in plants, humans and other pro & eukaryotic cells

In depth discussions

- Methods
- Troubleshooting
- Basic principles

# Meta-Teaching Aims

Comprehensive course design  
with step-by-step instructions



Instructions



In-Depth  
Discussions

In depth discussions with  
Lecturers and Tutors

Tips and Tricks on essential lab  
methods



Tips and Tricks

Tutorials &  
eLectures



Profound accompanying online  
tutorials and eLectures

# PROOF OF PERFORMANCE

**Computational Course**

**Lab Methods Course**

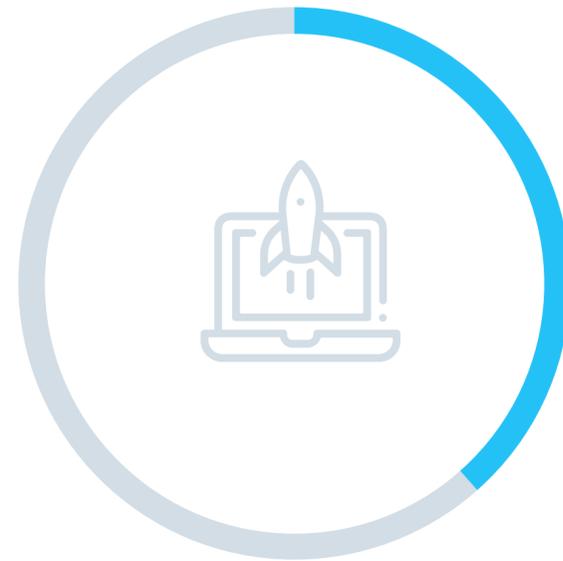
# PROOF OF PERFORMANCE

## Computational Course



**Daily/weekly exercises**

**submission** dates announced during course



**Multiple Choice Exam**

Date will be **end of December** and final date will be announced!

## Lab Methods Course

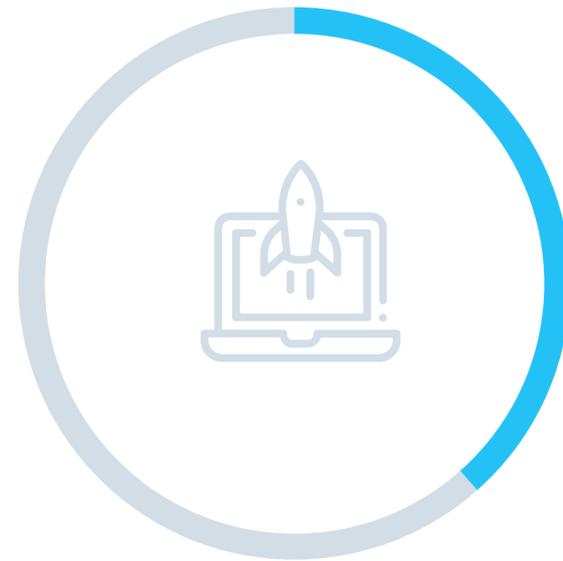
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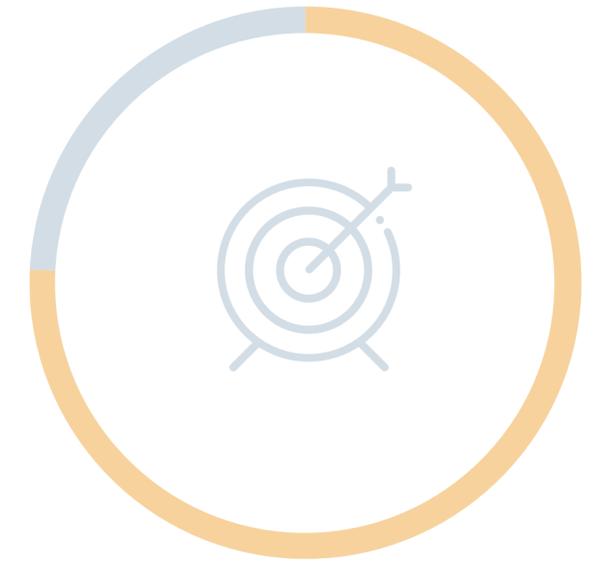
Date will be **end of December** and final date will be announced!

## Lab Methods Course



**Presentation / Seminar Talks**

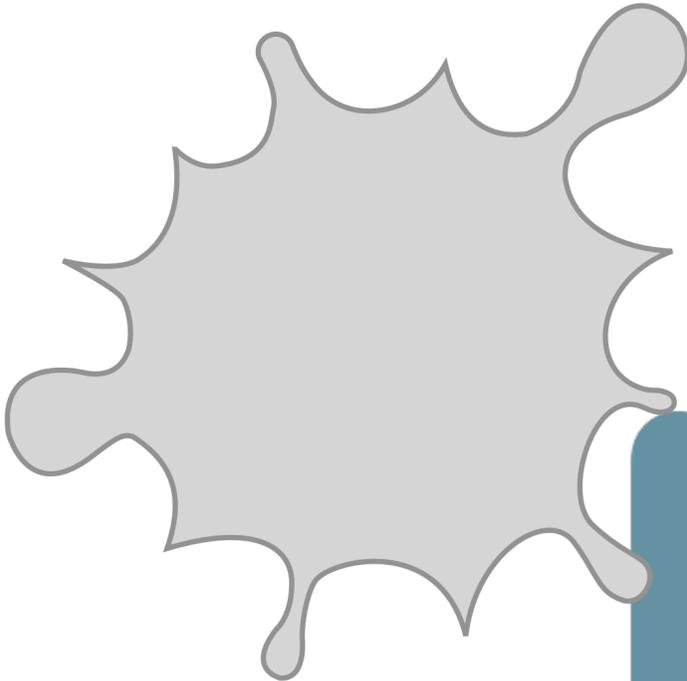
will take place **during the course**, topics will be assigned & distributed in the first week of the computational course



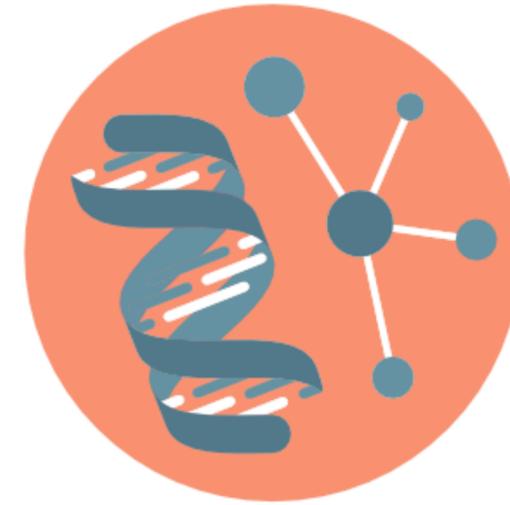
**“Lab” Report**

Submission 3 weeks after the course

ADD-ON RECOMMENDED LECTURE

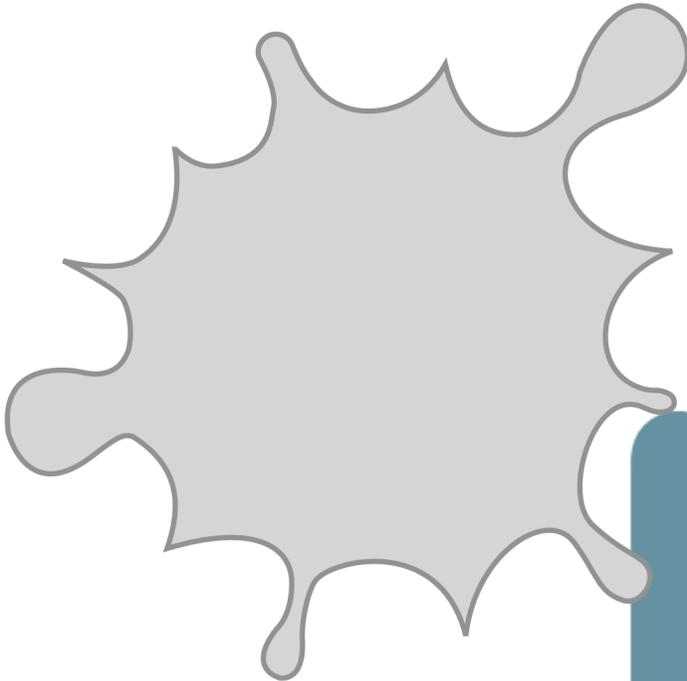


MMB

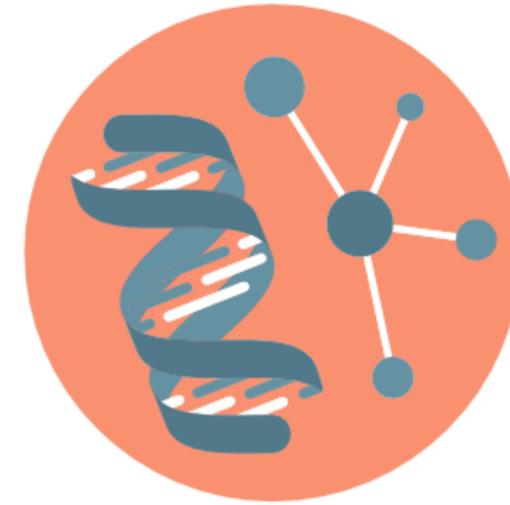


*e-Learning*

ADD-ON RECOMMENDED LECTURE



# MMB



*e-Learning*



- **Highly interactive lecture** with **fun online exercises** and live meetings
- **Topics:** essential methods such as Transformation, Western Blotting, IP, Sequencing, ...(these **are also essential topics for mandatory part** of the Lab methods and Computational modules)
- **Every 2 weeks a new Chapter** opens and **every other week there will be a tutorial online via Zoom** to discuss, transfer and apply what you have learned in each chapter.

You will **receive an email** with the link to the moodle page and enrolment key!!!

All additional information will be distributed via moodle!



Virtual Office and Consultation Hours will be provided via Moodle!

Please use first the Forum for your questions, then the virtual offices ours and then move to writing an email :)

...for general Questions regarding **Computational** Course:  
Dagmar Hann  
Email: [d.hann@bio.lmu.de](mailto:d.hann@bio.lmu.de)

...for general Questions regarding the **Lab** Course:  
Danny Meilinger  
Email: [d.meilinger@lmu.de](mailto:d.meilinger@lmu.de)