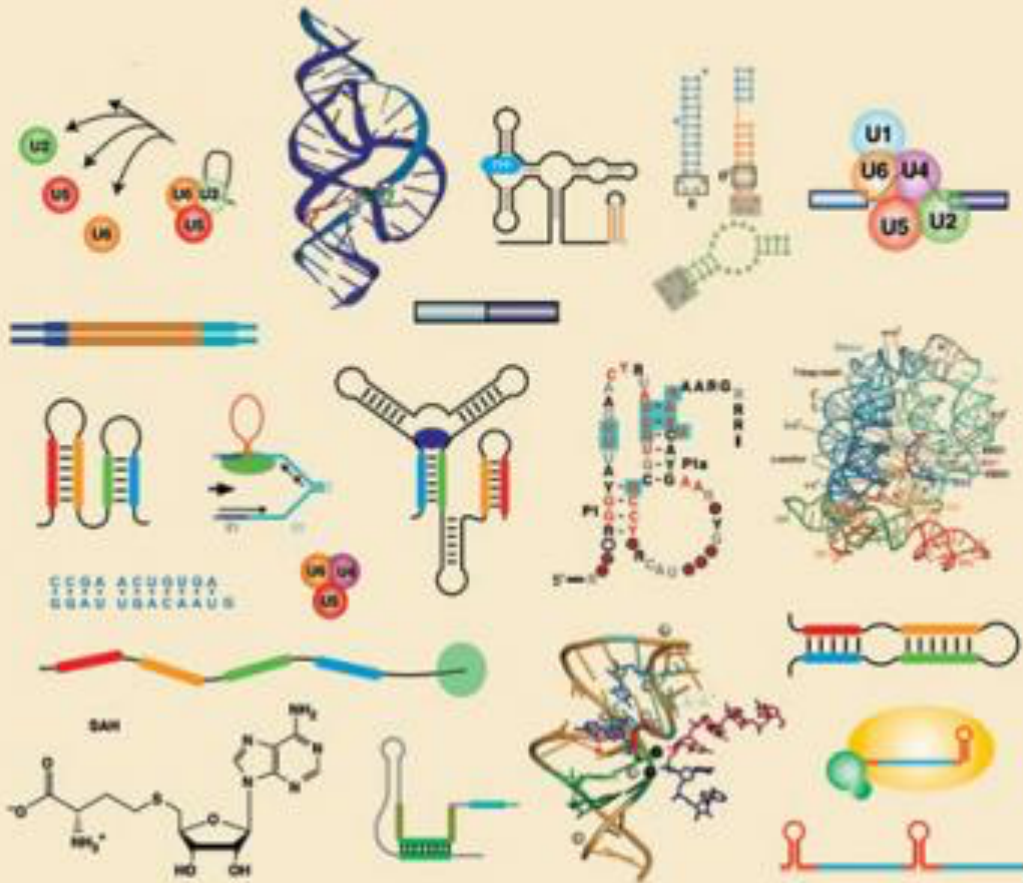


RNA

A LABORATORY MANUAL



RIO • ARES • HANNON • NILSEN

TRASCRIPTOMICA

Genomica
Funzionale

-

Biotecnologie
mediche
AA 2019/2020

Prof. Schoeftner
(Docente di riferimento)

TRASCRIPTOMICA

Schedule lectures– AA 2019/2020



Entire course in english language

TRASCRIITTOMICA

Schedule lectures– AA 2018/2019

October

L1: 01.10.2019: 14-16 (2h)
L2: 03.10.2019: 14-16 (2h)
L3: 08.10.2019: 14-16 (2h)
L4: 10.10.2019: 14-16 (3h)
L5: 15.10.2019: 14-16 (2h)
L6: 17.10.2019: 14-16 (2h)
L7: 18.10.2019: 09-12 (3h)
ERASMUS WEEK
L8: 29.10.2019: 14-16 (2h)
L9: 31.10.2019: 14-17 (3h)

November

L10: 07.11.2019: 16-18 (2h)
L11: 08.11.2019: 11-13(2h)
L12: 14.11.2019: 16-18 (2h)
L13: 15.11.2019: 11-13 (2h)
L14: 21.11.2019: 16-18 (2h)
L15: 22.12.2018: 11-13 (2h)
L16: 28.11.2019: 16-18 (2h)
L17: 29.11.2019: 11-13 (2h)

December

L18: 05.12.2018: 16-18 (2h)
L19: 06.12.2018: 11-13 (2h)
L20: 12.12.2018: 16-18 (2h)
L21: 13.12.2018: 11-13 (2h)
L22: 19.12.2019: 16-18 (2h)
L23: 20.12.2019: 16-18 (2h)

January - ricupero

48 ore = 6CFU

Edificio C1, Aula L

PPT SLIDES:

MOODLE FEDERALE

PASSWORD: Trascrittomica

Prof. Stefan Schoeftner

E-mail: sschoeftner@units.it

I only reply to official students' emails: @units.it
(no @gmail; @libero....)

Students' representatives: XXXXX@studenti.units.it

TRASCRIPTOMICA

Structure of the course:

1. **Professor's lectures: General Introduction, examples of ncRNAs (ca 9 lectures, each 2 hours)**
2. **Student's lectures on defined topics of ncRNA research (ca 13 lectures, each 2 hours)**

Goal of the course and training for students:

1. **General overview on ncRNA function in development and disease**
2. **Learning to extract general information on a larger field of ncRNA research**
3. **Learning to analyze-understand scientific data from a publication ("Journal club"); identify scientific question, understand experiments and interpret the data, make conclusions**
4. **Presenting most important information to an audience in a comprehensive manner**
5. **Getting prepared for Master thesis reality**
6. **Get used to apply scientific – english - language**

TRASCRIPTOMICA - EXAMS

1. LECTURE BY STUDENT:

- Evaluation of student performance is based on the quality of the presented student lecture (**score: 0-16 points**).
- The evaluation of the lecture presented by an individual student will remain valid for 2 academic years.

2. ORAL EXAM

- In addition, an oral exam will be performed that contains 3 questions related to the topics presented during all lectures of the course (**score: 0-5 points per question; total 15**).
- In the oral exam the obtained knowledge but also the ability to interpret scientific data and to put scientific findings/data into a larger context will be evaluated.

IMPORTANT:

Students that do not have presented a lecture during the course are not allowed to perform the oral exam.

TRASCRIPTOMICA - EXAMS

...how are student's lectures and oral exam organized???

Student's Lectures:

- Student groups comprising 4 colleagues will be formed
- Student groups choose a topic

Oral exam:

- An inscription into an "Appello" on Esse3 is necessary to perform the oral exam.
- Students can reject the result of the oral exam until 7 days after the date of the oral exam.
- Books, electronic devices or scripts are not allowed during the exam.

Final grade (voto finale):

- Points Student's lecture + Points oral exam

TRASCRIITTOMICA

GF 2° year 1° Semester

Schedule lectures– AA 2015/2016

October

L1: 01.10.2019: 14-16 (2h) – Prof. Lecture
L2: 03.10.2019: 14-16 (2h) – Prof. Lecture
L3: 08.10.2019: 14-16 (2h) – Prof. Lecture
L4: 10.10.2019: 14-16 (3h) – Prof. Lecture
L5: 15.10.2019: 14-16 (2h) – Prof. Lecture
L6: 17.10.2019: 14-16 (2h) – Prof. Lecture
L7: 18.10.2019: 09-12 (3h) – Prof. Lecture
ERASMUS WEEK
L8: 29.10.2019: 14-16 (2h) – Prof. Lecture
L9: 31.10.2019: 14-17 (3h) – Prof. Lecture

November

L10: 07.11.2019: 16-18 (2h) – Prof. Lecture
L11: 08.11.2019: 11-13(2h) – Prof. Lecture
L12: 14.11.2019: 16-18 (2h) – Student Lecture 1
L13: 15.11.2019: 11-13 (2h) – Student Lecture 2
L14: 21.11.2019: 16-18 (2h) – Student Lecture 3
L15: 22.12.2018: 11-13 (2h) – Student Lecture 4
L16: 28.11.2019: 16-18 (2h) – Student Lecture 5
L17: 29.11.2019: 11-13 (2h) – Student Lecture 6

December

L18: 05.12.2018: 16-18 (2h) – Student Lecture 7
L19: 06.12.2018: 11-13 (2h) – Student Lecture 8
L20: 12.12.2018: 16-18 (2h) – Student Lecture 9
L21: 13.12.2018: 11-13 (2h) – Student Lecture 10
L22: 19.12.2019: 16-18 (2h) – Student Lecture 11
L23: 20.12.2019: 16-18 (2h) – Student Lecture 12

January - recupero

48 ore = 6CFU

1. Formation of groups with 3-4 Students – 12-13 groups:

→ **DEADLINE: 08.10.2018**

→ **Students that in not in a group will be organized by Prof in groups:**

2. Available topics will be published on moodle

→ **Student groups select their topics**

3. Topics of respective groups will be communicated to Professor by Students' representative

→ **DEADLINE: 15.10.2019 (at the lecture)**

→ **Student-groups that do not communicate a topic get assigned a topic by the Prof.**

TRASCRIPTOMICA

Schedule lectures– AA 2018/2019

Student's seminar structure – in English:

- 1. First part of seminar** (ca. 35 min): general introduction into the topic (**max 15 powerpoint slides**) – Review provided by Prof.
- 2. Second part of the seminar** (ca. 35 min): students present a key scientific publication on the topic (**max. 15 powerpoint slides**)
(ideally a study published in Science, Nature, Cell, Nature Cell Biology, Molecular Cell, Nature Communications, EMBO Journal,... – high impact journals)
- 3. Third part of the seminar** (ca. 15 min): **question by colleagues** - student group answers

IMPORTANT: each student has to cover presentation time

TRASCRIPTOMICA

Schedule lectures– AA 2018/2019

HOW TO CHOOSE A TOPIC – AND HOW TO START

Topic: A recent review on each particular topic available will be provided by Professor and put on moodle.

- Students form group and discuss sequence of presentations – consider that normally 2-3 lectures will be postponed due to Prof.'s obligations
- **Student representative provide an allocation of individual talks inside the lecture schedule**
- Students use the review to get into the topic
- Students chose an important publication (scientific work) stated in the review or chose a newer scientific publication related to the topic
- Students may chose another review that relates better to the scientific work
- Students send the literature (review(s) and scientific paper) per mail to Professor
- **Professor gives OK**
- Professor puts the papers on moodle
- Students make the presentation and Prof. will put the ppt presentation on Moodle
- TIMING: DRAFT OF PRESENTATION WILL BE PROVIDED TO PROF: 2 Weeks before presentation; Meeting with Prof. to discuss slides and suggestions for improvements. Precise schedule will be provided when presentations have been assigned

TOPICS

1. Dosage Compensation in *D. melanogaster* (rox RNAs)
2. Dosage Compensation in vertebrates (Xist-Tsix)
3. Telomerase RNA maturation and Cajal Bodies
4. RNA:Protein bodies: Paraspeckles (NEAT-1)
5. Genomic Imprinting regulated by lncRNAs
6. lncRNAs and Hyperconserved elements
7. piRNAs in *D. melanogaster*
8. R-loops and genomic instability
9. R-loops and regulation of gene expression
10. RNA Editing (ADAR, immunesystem)
11. lncRNAs and resistance of tumors to chemotherapy
12. lncRNAs and resistance of tumors to immunotherapy
13. lncRNAs and cancer formation and progression

OTHER ACTIVITIES

Interreg Italia – Austria Project: P-CARE

Generation of technological platforms to overcome therapy resistance in human cancer

Project with high content of communication:

- **Website**
- **Other activities**

POSSIBILITIES TO INTERESTED STUDENTS:

Look for 1 – 2 papers per month on progress in research to overcome therapy resistance

Write short summary (5 lines) for the public : will be published with name on project website