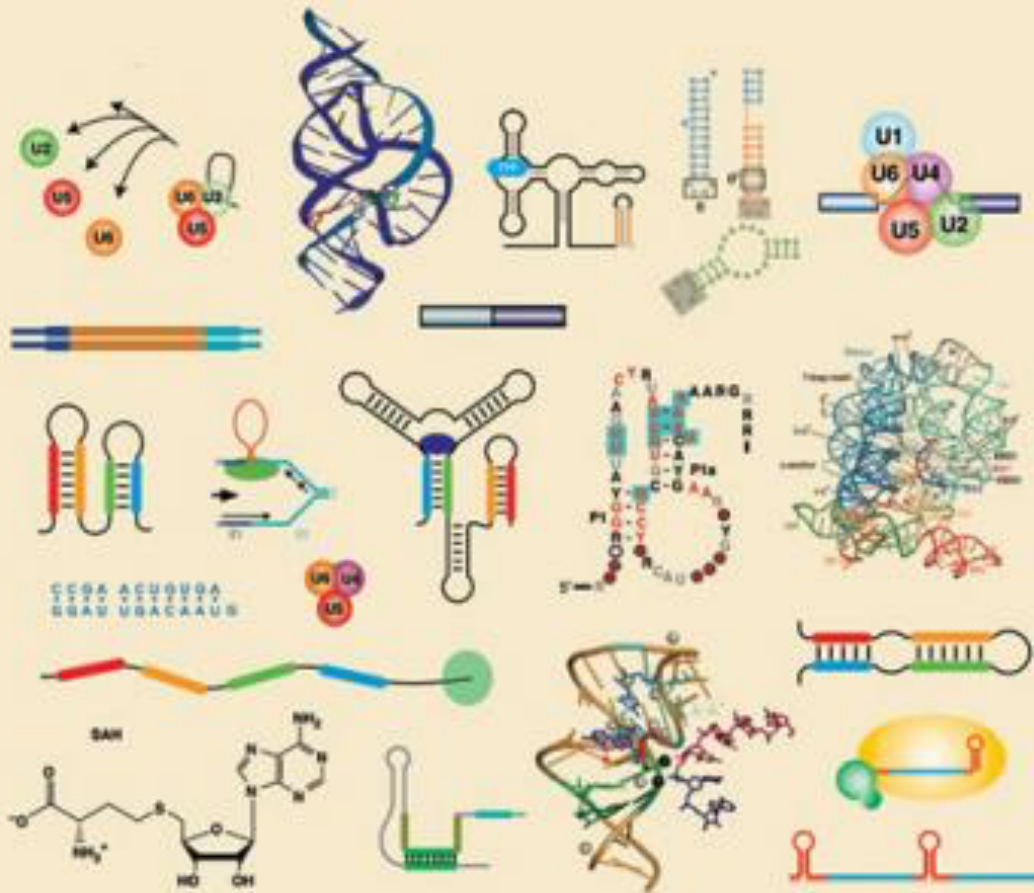


RNA

A LABORATORY MANUAL



RIO • ARES • HANNON • NILSEN

Non-coding RNA Biology

Genomica
Funzionale

-

Biotechnologie
mediche
AA 2021/2022

Prof. Schoeftner

(Docente di riferimento)

Guidelines MS Teams AA2021-2022



POLICY OF THE UNIVERSITY OF TRIESTE:

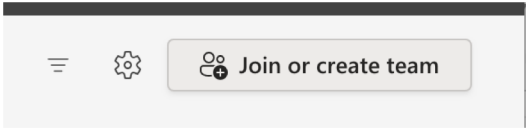
- **ALL LECTURES “IN PRESENZA”, recording of lectures provided on MS Teams**
- **ONLY IN EXCEPTIONAL CASES, students can opt for the didattica “IN PARALLELA”**

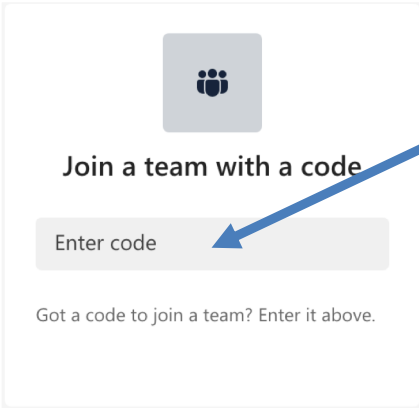
Guidelines MS Teams AA2021-2022

ncRNA

For ALL students (in presenza e didattica in parallela):

Use the code to participate to the MS Team “Non-coding RNA Biology”:

1. 

2.  **pucod65**
(code provided in Moodle and saved lecture ppt)

This code enables you to become a participant of our Teams (only using your UniTS account without requesting the OK from owners of the Team)

Once member of the Team you get access to the video recording of the lectures and eventual other supporting material. You CANNOT join the lecture in direct streaming

Note: videos will be automatically cancelled 180 days after the end of the lecture

Note: the code DOES NOT give access to the lectures in direct streaming!!

Guidelines MS Teams AA2021-2022



For SELECTED students that have the OK to follow the lectures in direct streaming

NORMATIVA DSV:

Gli studenti di CdS del DSV che hanno la facoltà chiedere la modalità di frequenza (anche temporanea) tramite didattica parallela sono:

- **gli studenti affetti da particolari disabilità,**
- **studenti genitori,**
- **gli studenti detenuti e**
- **gli studenti che per ragioni sanitarie legate all'emergenza covid19** sono temporaneamente esclusi dall'accesso alle lezioni in presenza.

IMPORTANTE:

Gli studenti che si riconoscono in queste categorie per accedere alla didattica parallela **devono** presentare la richiesta alla **Segreteria didattica che, valutata l'ammissibilità delle domande**, la inoltrerà al coordinatore del CdS (Prof. Martellos) interessato ed ai docenti degli insegnamenti (Prof. Bandiera, Schoeftner) di cui si chiede la didattica parallela.

HOW TO GET ACCESS:

When lecture channel has been opened (NOT EARLIER), ask permission to join the lecture channel. Lecturer will allow to join the session.

THIS IS AN EXCEPTION: THE POLICY OF UNI TS IS TO OFFER ALL LECTURES "IN PRESENZA"

Guidelines MOODLE AA2021-2022



Supporting material for the lectures and laboratory activity will be provided on Moodle

- **LECTURE SLIDES**
- **OTHER SUPPORTING MATERIAL**
- **RESULTS OF EXAMS**
- **NO VIDEO RECORDINGS (they are stored for 180 days on MS Teams)**
- **NOTE: Material on Moodle will be stored for at least 2 years, accessible to students inscribed into the Lecture**

ncRNA Biology

Schedule lectures– AA 2020/2021

October (12 hours)

- L1: 04.10.2021: 16-18 (2h)
- L2: 05.10.2021: 14-16 (2h)
- L3: 11.10.2021: 16-18 (2h)
- L4: 12.10.2021: 14-16 (2h)
- L5: 18.10.2021: 16-18 (2h)
- L6: 19.10.2020: 14-16 (2h)

November (16 hours)

- L7: 08.11.2020: 16-18 (2h)
- L8: 09.11.2020: 14-16- (2h)
- L9: 15.11.2020: 16-18 (2h)
- L10: 16.11.2020: 14:45-16 (2h)
- L11: 22.11.2020: 16-18 (2h)
- L12: 23.11.2020: 14-16 (2h)
- L13: 29.11.2020: 16-18 (2h)
- L14: 30.11.2020: 14-16 (2h)

December (12 hours)

- L15: 06.12.2020: 16-18 (2h)
- L16: 07.12.2020: 14-16 (2h)
- L17: 13.12.2020: 16-18 (2h)
- L18: 14.12.2019: 14-16 (2h)
- L19: 20.12.2019: 16-18 (2h)
- L20: 21.12.2019: 14-16 (2h)

January (8 hours)

- L21: 10.01.2022: 16-18 (2h)
- L22: 11.01.2022: 14-16 (2h)
- L23: 17.01.2022: 16-18 (2h)
- L24: 18.01.2022: 14-16 (2h)

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

ncRNA Biology

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. 15 lectures, each 2 hours)
3. 1 Lecture for questions before exam

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

My Lectures:

1. Introduction – Non coding RNA revolution
2. lncRNA in Physiology:
 - Introduction lncRNAs
 - Pseudogene derived lncRNAs
 - Pseudogene lncRNA function: *mOct4P4* lncRNA and ancestral gene regulation
3. lncRNAs and control of epigenetics in disease
 - FSHD and D-BET
4. Controlling the action of miRNAs (ceRNAs)
 - miRNA review
 - ceRNAs in cancer
 - Circular RNAs (circRNAs)
 - endosiRNAs in stem cell biology
5. Control of regulatory elements by ncRNAs
 - eRNAs and enhancer control
6. DNA Damage and ncRNA
 - DNA damage response RNAs

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

Student's Lectures (Evaluation: max. 16 points) :

- Student groups comprising 2-3 colleagues will be formed autonomously
- Student groups choose between the proposed papers (Moodle)
- Students groups select 2 reviews on the specific topic
- Students prepare presentation and present to other students as lecture

Oral exam (Evaluation: max 15 points):

- An inscription into an "Appello" on Esse3 is necessary to perform the oral exam
- Exam: depending on Covid19 situation preferentially via MS Teams
- → 1 question about own seminar presented
- → 1 question on seminar of colleagues
- → 1 question of Prof.s Lectures
- → Students need to show general knowledge on individual topics and discuss experimental approaches on how to address a particular problem related to the topics (scientific question – experimental approach chosen – result – interpretation
- → Duration: 20-30 min per exam
- → Books, electronic devices or scripts are not allowed during the exam.

Final grade (voto finale):

- Points Student's lecture + Points oral exam

IMPORTANT:

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

STUDENTS' PPT PRESENTATION

Student's seminar structure – in English:

- 1. First part of seminar (ca. 25 min): general introduction into the topic using the reviews (10-15 powerpoint slides).**
- 2. Second part of the seminar (max. 35 min): Students present the results of a key scientific publication on the topic (10- 15 powerpoint slides)**
Publications to be selected are available on Moodle
- 3. Third part (max. 3-5 min): Integrative model of research paper, put into a larger context (1 powerpoint slide)**
- 4. Fourth part of the seminar (ca. 5 min): Discussion: question by colleagues.**

IMPORTANT: students of a group needs to cover the same amount of presentation time

SCHEDULE FOR STUDENT SEMINAR PREPARATION

HOW TO CHOOSE A TOPIC – AND HOW TO START

Topics: recent research papers are available on Moodle.

- **Step 1:** Students together with the students representatives provide a list with all students that will attend the lecture AA 2021 – 2022 will be generated until Tuesday **05.10.2021; after that total number of student groups will be determined**
- **Step 2:** Students form groups and choose research papers until Monday **11.10.2021;** Please present a table naming groups, students + e-mail of individual groups members. Student groups can already start selecting reviews on the topic
- **Step 3:** Student representatives propose allocation of students talks in the lecture schedule: Tuesday **12.10.2021; All student lectures need to finish before christmas holidays**
- **Step 4:** Students send the papers reviews per mail to Professor
- Students start to prepare presentations
- DRAFT OF PRESENTATION WILL BE DISCUSSED CA: 2 WEEKS BEFORE PRESENTATION: 30 MINUTES OF LECTURE – A SCHEDULE WILL BE PROVIDED

SCHEDULE FOR STUDENT SEMINAR PREPARATION

STUDENT'S SEMINAR PROGRAM

	Group 1	Group 2			Group 3
Topic Number	5	2			11
Title	Genomic Imprinting regulated by lncRNAs	Dosage Compensation in mammals (focus on ncRNAs)	No lecture	No lecture	lncRNAs and cancer chemoresistance
Student 1	Alessio Conci	Annamaria Regina			Daniele Ammeti
Student 2	Eleonora Lucontonio	Claudio Antonio Coppola			Gabriele Di Giustino
Student 3	Ermelinda Sabarese	Giulia Maria Clemenza			Lorenzo Graziani
Presentation of draft to Prof.	31.10.2019	07.11.2019			15.11.2019
Date of presentation	14.11.2019	15.11.2019	21.11.2019	22.11.2019	28.11.2019

	Group 4	Group 5	Group 6	Group 7	Group 8
Topic Number	6	10	9	12	1
Title	Ultraconserved elements (UCEs) and lncRNAs	RNA Editing (ADAR, immunesystem)	R-loops - Gene expression and Chromatin Structure	lncRNAs and cancer immunology/therapy resistance	Dosage Compensation in D.melanogaster (roX RNAs)
Student 1	Lucia D'Amico	Ciro Danubio	Violina Potlog	Debora Maffeo	Séverine Nozownik
Student 2	Maria Pia Viscomi	Carmen Tucci	Margot Ladislav	Carmela Tangredi	Roberta Palmitessa
Student 3	Agata Valentino	Michele Tonetti	Isabella Concina	Ilaria Ziccardi	Simone Bellini
Presentation of draft to Prof.	15.11.2019	22.11.2019 per e-mail	28.11.2019	29.12.2019	02.12.2019
Date of presentation	29.11.2019	02.12.2019 (new)	05.12.2019	06.12.2019	11.12.2019 (new)