

2025 “InteRNAAt” summer school: detailed program

Website of the event: <https://internat25.sciencesconf.org/>

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Contents

1	Introductory lectures and self-presentation (Monday afternoon)	2
2	siRNA and miRNA biogenesis, function, and experimental detection (Tuesday morning)	2
3	Nuclear roles of small regulatory RNAs (Tuesday afternoon)	2
4	Targeting rules of small regulatory RNAs (Tuesday afternoon)	2
5	Open questions in small RNA field; small RNAs in clinics (Wednesday morning)	3
6	Social event (Wednesday afternoon)	3
7	Small RNA pathways in plants (Wednesday evening)	3
8	piRNAs (Thursday morning)	3
9	Small RNAs in host-virus interactions (Thursday afternoon)	4
10	Experimental detection and quantification of small regulatory RNAs (Friday morning)	4
11	On-site evaluation of the school, open questions	4

1 Introductory lectures and self-presentation (Monday afternoon)

Date: Monday, October 6, 2:00–7:30 pm.

Speakers: H. Seitz, K. Jouravleva, I. Busseau, attendees.

2:00–2:15 Welcome speech (H. Seitz)

2:15–2:45 Introduction into small regulatory RNAs: structure and function (K. Jouravleva)

2:45–3:30 RNA interference: an overview (H. Seitz)

3:30–4:15 microRNAs: an overview (H. Seitz)

4:15–4:45: Coffee break

4:45–5:25 The discovery of piRNAs (H. Seitz)

5:25–5:45 piRNA and the control of transposable elements: the *Drosophila* story (I. Busseau)

5:45–7:00 Self-presentation of attendees

7:00–7:30 Icebreaker drinks

7:30: Dinner

2 siRNA and miRNA biogenesis, function, and experimental detection (Tuesday morning)

Date: Tuesday, October 7, 9:00 am–12:30 pm.

Speakers: I. Busseau, K. Jouravleva, H. Seitz, J. Cavaillé.

9:00–9:15 Overview of the program (I. Busseau)

9:15–9:35 miRNA biogenesis (H. Seitz)

9:35–10:30 siRNA and miRNA biogenesis: biochemical insights (K. Jouravleva)

10:30–11:00 Detection and annotation of miRNAs, siRNAs, and piRNAs (H. Seitz)

11:00–11:30: Coffee break (*presence of the N.E.B. advertising booth*)

11:30–12:30 Documented roles of miRNAs in animals (J. Cavaillé)

12:30: Lunch

3 Nuclear roles of small regulatory RNAs (Tuesday afternoon)

Date: Tuesday, October 7, 2:00 pm–4:30 pm.

Speakers: K. Mochizuki, A. Verdel.

2:00–3:00 scnRNA-mediated heterochromatinization in ciliates (K. Mochizuki)

3:00–4:00 Nuclear RNAi-related phenomena in fission yeast (A. Verdel)

4:00–4:30: Coffee break (*presence of the N.E.B. advertising booth*)

4 Targeting rules of small regulatory RNAs (Tuesday afternoon)

Date: Tuesday, October 7, 4:30 pm–7:00 pm.

Speakers: H. Seitz, K. Jouravleva.

- 4:30–5:30 Methods for target identification — part I (H. Seitz)
- 5:30–6:30 Methods for target identification — part II (K. Jouravleva)
- 6:30–7:00 Limitations and biases of functional assignment in animals (H. Seitz)

7:00: Dinner

5 Open questions in small RNA field; small RNAs in clinics (Wednesday morning)

Date: Wednesday, October 8, 9:00 am–12:30 pm.

Speakers: I. Busseau, K. Jouravleva, F. Nicassio.

- 9:00–9:15 Overview of the program (I. Busseau)
- 9:15–10:15 Cellular localization of miRISC and other understudied aspects (K. Jouravleva)

10:15–10:45: Coffee break

- 10:45–12:15 Applications and limitations of human small RNA biology in the clinic (F. Nicassio)

12:15: Lunch

6 Social event (Wednesday afternoon)

Date: Wednesday, October 8, 2:00 pm–6:00 pm.

Visit of Sète.

7 Small RNA pathways in plants (Wednesday evening)

Date: Wednesday, October 8, 6:00 pm–7:30 pm.

Speaker: H. Vaucheret

- 6:00–7:30 The plant small RNA landscape (H. Vaucheret)

7:30: Dinner

8 piRNAs (Thursday morning)

Date: Thursday, October 9, 9:00 am–12:30 pm.

Speakers: I. Busseau, G. Cecere, S. Chambeyron.

- 9:00–9:15 Overview of the program (I. Busseau)
- 9:15–10:45 The peculiarities of *C. elegans* small RNA pathways (G. Cecere)

10:45–11:15: Coffee break (*presence of the N.E.B. and Microsynth advertising booths*)

- 11:15–12:15 The biology of piRNAs (S. Chambeyron)

12:15: Lunch

9 Small RNAs in host-virus interactions (Thursday afternoon)

Date: Thursday, October 9, 2:00 pm–7:30 pm.

Speakers: S. Pfeffer, K. Jouravleva.

2:00–3:45 RNAi as an antiviral defense system (S. Pfeffer)

3:45–4:00: Coffee break (*presence of the N.E.B. and Microsynth advertising booths*)

4:00–5:15 Role of small RNAs in viral infections (S. Pfeffer)

5:15–5:30: Coffee break (*presence of the N.E.B. and Microsynth advertising booths*)

5:30–6:30 Roles of Argonaute pathways in procaryotes (K. Jouravleva)

7:00: Dinner

10 Experimental detection and quantification of small regulatory RNAs (Friday morning)

Date: Friday, October 10, 9:00 am–12:30 pm.

Speakers: K. Jouravleva, H. Seitz, M. van den Beek.

9:00–9:15 Overview of the program (K. Jouravleva)

9:15–9:45 Methods for small RNA quantification (H. Seitz)

9:45–10:15 Small RNA-Seq: principle and usage (H. Seitz)

10:15–10:45: Coffee break (*presence of the Microsynth advertising booth*)

10:45–12:30 Small RNA-Seq data analysis: practical class (M. van den Beek)

12:30: Lunch

11 On-site evaluation of the school, open questions

Date: Friday, October 10, 2:00–3:30 pm.

Speakers: attendees.

First we will take some time to answer every remaining question, and engage into an interactive discussion with the attendees about their own projects, and how they envision working on small RNAs.

Then we will ask them to fill a questionnaire for the evaluation of the whole summer school (this is a requisite from CNRS), in order to identify the points that worked well and those that need to be improved for a future issue of the school.