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# The ninth DNA metabarcoding Spring School in Colombia

- Events - 9 The ninth DNA metabarcoding Spring School in Colombia -

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DNA metabarcoding is a rapidly evolving method for assessing biodiversity from environmental DNA and bulk samples. It has a wide range of applications: biodiversity monitoring, animal diet assessment, reconstruction of paleo communities, among others. DNA metabarcoding uses molecular techniques such as PCR and next generation sequencing, and requires a broad range of skills, as it integrates molecular biology, bioinformatics, biostatistics, and ecology.

The DNA metabarcoding spring school is now in its ninth edition. This year, it is co-organized and funded by the metabarcoding.org team, [Grow Colombia](#), the [Instituto de Investigación de Recursos Biológicos Alexander von Humboldt](#), the [Andes University](#), the [Earlham Institute](#) and Ecopetrol in Colombia

The DNA metabarcoding spring school will be held

on October the 31st at Bogota

and from November the 1st to the 6th, 2019 at Villa de Leyva

The school will comprise a symposium in Bogota during the first day followed by lectures and practicals in Villa de Leyva.

**All lectures and practicals will be presented in English**

The symposium is open to anyone on the basis of a simple registration at the [symposium registration](#).

Candidates for the lectures and practicals must apply by email to the following address:

colombia2019 at metabarcoding.org

Before noon Colombia time on September the 20th, 2019

For the application to the school the email must contain a brief curriculum vitae and a letter of motivation (one page max) indicating how the applicant's research will benefit from DNA metabarcoding and what (s)he is hoping to learn from this school. As part of the course, participants will have to give a flash talk (5 minutes) about their research and how it is related to DNA metabarcoding. The number of participants to the lectures and practicals of this school is limited to 24. It is compulsory for the participants to the lectures and practicals to also attend the Symposium. The selected participants will receive confirmation of acceptance by Tuesday 24 September.

## Main lecturers

- [Inger Alsos](#) (Tromsø University, Norway)
- Aurélie Bonin (Milano University, Italy)
- [Frédéric Boyer](#) (LECA, CNRS, France)
- [Anthony Chariton](#) (Macquarie University, Australia)
- Eric Coissac (LECA, UGA, France)
- [Tristan Cordier](#) (UNIGE, Switzerland)
- Mailyn Gonzalez (Humboldt institute, Colombia)
- [Wilfried Haerty](#) (Earlham Institute, United Kingdom)
- Pierre Taberlet (LECA, CNRS, France)
- [Lucie Zinger](#) (IBENS, ENS, France)

# Course Schedule

The lectures will cover different aspects of DNA metabarcoding. Molecular ecology practicals will present basic techniques for DNA extraction in the field, DNA amplification by PCR and MinIon sequencing. The bioinformatics practicals will introduce data analysis from raw sequences to basic ecological conclusions.

Colombia DNA metabarcoding school agenda							
	31/10	1/11	2/11	3/11	4/11	5/11	6/11
	THURSDAY	FRIDAY	SATURDAY	SUNDAY	MONDAY	TUESDAY	WEDNESDAY
	Bogota	Villa de Leyva	Villa de Leyva	Villa de Leyva	Villa de Leyva	Villa de Leyva	Villa de Leyva
08:00		Transfer to Villa de Leyva	Raw data handling for metabarcoding (Eric)	Field excursion	Machine learning for biomonitoring (Tristan)	Monitoring and assessing coastal environments (Anthony)	DNA metabarcoding is not magic (Pierre)
08:30							
09:00	Symposium on environmental DNA (speakers: Maily, Wilfried, Pierre, Eric, Aurélie, Lucie, Tristan, Inger, Anthony)						
09:30			Group 1: DNA extraction from soil and litter (Pierre, Aurélie) Group 2: Introduction to Unix (Fred, Eric)		Group 1: Practical on machine learning (Tristan) Group 2: Obitools 16 plants (Fred)	Group 1: Litter data processing (Fred, Lucie) Group 2: Round table. experimental design (Pierre, Aurélie) bioinformatics (Eric, Anthony)	Minion experiment - data analysis (Wilfried, Fred)
10:00							
10:30							
11:00							
11:30							
12:00							
12:30							
13:00							
13:30			Diet analysis using metabarcoding (Aurélie)	DNA metabarcoding and community ecology (Lucie)	Metabarcodes (Eric)	Metabarcoding: technical aspects (Pierre)	Reference library and a priori knowledge in eDNA studies (Inger)
14:00							
14:30							
15:00							
15:30		Group 1: Introduction to Unix (Fred) Group 2: Primer design, demonstration (Eric)	Group 1: Primer design, demonstration (Eric) Group 2: DNA extraction from soil and litter (Pierre, Aurélie)	My metabarcoding in 300'	Group 1: Obitools 16 plants (Fred) Group 2: Practical on machine learning (Tristan)	Group 1: Round table. experimental design (Pierre, Aurélie) bioinformatics (Eric, Anthony) Group 2: Litter data processing (Fred, Lucie)	Transfer to Bogota
16:00							
16:30							
17:00							
17:30							
...							
20:00		Minion experiment - introduction (Wilfried)	Minion experiment - PCR (Wilfried)	Minion experiment - Libraries (Wilfried)	Minion experiment - run (Wilfried)	Minion experiment - run (Wilfried)	
20:30							
21:00							

## Venue

The school will take place at the Andes University in Bogota for the first symposium day and at [Casa Fundadores](#) in Villa de Leyva for the following day. Transfers between Bogota and Villa de Leyva will be organized by the school.

Attendees of the school will be welcomed in Bogota and will be transferred to Villa de Leyva by bus. Therefore, it will not be possible to arrive after the beginning of the school or to leave before the end.

## Cost of the school:

The total cost for the school is estimated to be around 500Euros. This includes hotels, meals and the return trip between Bogota and Villa de Leyva. The lecture cost are covered by the school organizers. However, participants

have to pay for their trip to Bogota. Participants from Colombia have the option to obtain financial support from the Earlham Institute.

### **To get there:**

The symposium will start on the 31th October morning. Therefore, attendees will have to be in Bogota at least on the day before.