



qbio  
quantitative  
biology

# QBIO MASTER PROGRAM

## quantitative biology in practice

# LAB1

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## OBJECTIVES OF THE LAB1 MODULE

Initiation on good practices on how to conduct research in a lab :

1. Series of seminars (9 seminars)
2. Two practical stays in a research lab (Lab1.1 and 1.2)
3. Evaluation of the research conducted during the practicals

## SERIES OF SEMINARS

Day	Time	Name	Topic
Reported	TBD	Marie Laure Parmentier	Green Science
Wed January 26	10h30 - 12h	Caroline Clerte	H&S - Lab notebooks
Thu January 27	10h30 - 12h	Cherine Bechara & Manu Margeat	Oral and poster presentation 1
Mon January 31	14h - 15h30	Thierry Gostan	General statistics & concept of epistemology
Wed February 2	10h30 - 12h	Sophie Nicole	Scientific Integrity
Mon February 7	9h-10h30	Cherine Bechara & Manu Margeat	Oral and poster presentation 2
Mon February 7	10h30 - 12h	Laure Lefrancois	Open Science
Wed February 9	10h30 - 12h	Jean Philippe Villemin	Data visualisation
TBD	TBD	Luca Ciandrini	How to write a report

Two practical stays in a research lab  
2 x 12 days

- Lab 1.1 : February 3<sup>rd</sup> / March 18<sup>th</sup>  
Thursdays / Fridays (except holidays)
- Lab 1.2 : March 31<sup>th</sup> / May 6<sup>th</sup>  
Thursdays / Fridays (except last 2 weeks)

1 or 2 students per practical  
Lab1.1 and 1.2 advisors should be different

semaine 5 31/01-04/02	9h45-11h15			10h30 - 12h : S. Nicole	1.1
	11h30-13h				
	13h15-14h45	14h-15h30 : T.Gostan	Biol syst modeling with Python, salle info, FdS (Jacques)		
	15h-16h30				
	16h45-18h15				
semaine 6 07/02-11/02	18h30-20h				1.2
	8h-9h30	9h - 10h30 : Bechara & Margeat	Biol syst modeling with Python, salle info, FdS (Jacques)	10h - 12h : JP.Villemin	
	9h45-11h15	10h30 - 12h : L.Lefrancois			
	11h30-13h				
	13h15-14h45				
semaine 7 14/02-18/02	15h-16h30				1.3
	16h45-18h15				
	18h30-20h				
	8h-9h30	about : 9h-10h30 info EM (Patrick)	EM (Josephine) + Xtal (François) (rotation des groupes)	EM (Josephine) + Xtal (François) (rotation des groupes)	
	9h45-11h15	10h45-11h15 info Xtal, Stefano, NPP	10h45-11h15 info Xtal, Stefano, NPP	10h45-11h15 info Xtal, Stefano, NPP	
semaine 8 21/02-25/02	11h30-13h				1.4
	13h15-14h45				
	15h-16h30				
	16h45-18h15				
	18h30-20h				
semaine 9 28/02-04/03	8h-9h30				1.5
	9h45-11h15				
	11h30-13h				
	13h15-14h45				
	15h-16h30				
semaine 10 07/03-11/03	16h45-18h15				1.6
	18h30-20h				
	8h-9h30	9h-10h EM (Patrick)	9h-10h EM (Patrick)	9h00-10h20 Xtal - François (vérification de la croissance)	
	9h45-11h15	10h-10h45 EM (Patrick, NPP)	10h-10h45 EM (Patrick, NPP)	10h20-12h Xtal - François (vérification de la croissance, NPP)	
	11h30-13h				
semaine 11 14/03-18/03	13h15-14h45	EM (temps réservé pour le travail des étudiants)	EM (temps réservé pour le travail des étudiants)	15h-17h Xtal (Stefano)	
	15h-16h30				
	16h45-18h15				
	18h30-20h				
	8h-9h30				
semaine 12 21/03-25/03	9h45-11h15	9h45-11h45 Xtal (Stefano)	9h45-11h45 Xtal (Stefano)		1.7
	11h30-13h	11h45-12h (Stefano, NPP)	11h45-12h (Stefano, NPP)		
	13h15-14h45	Xtal (temps réservé pour le travail des étudiants)	Xtal (temps réservé pour le travail des étudiants)	Stochastic models and Bayesian learning, Salle info FdS (Ovidiu)	
	15h-16h30				
	16h45-18h15				

semaine 13 28/03-01/04	18h30-20h				2.1
	8h-9h30				
	9h45-11h15				
	11h30-13h				
	13h15-14h45	Biol syst modeling with Python, salle info, FdS (Jacques)		Stochastic models and Bayesian learning, Salle info FdS (Ovidiu)	
semaine 14 04/04-08/04	15h-16h30				2.2
	16h45-18h15				
	18h30-20h				
	8h-9h30				
	9h45-11h15				
semaine 15 11/04-15/04	11h30-13h				2.3
	13h15-14h45				
	15h-16h30				
	16h45-18h15				
	18h30-20h				
semaine 16 18/04-22/04	8h-9h30				2.4
	9h45-11h15				
	11h30-13h				
	13h15-14h45				
	15h-16h30				
semaine 17 25/04-29/04	16h45-18h15				2.5 / 2.6
	18h30-20h				
	8h-9h30				
	9h45-11h15				
	11h30-13h				
semaine 18 02/05-06/05	13h15-14h45				2.5 / 2.6
	15h-16h30				
	16h45-18h15				
	18h30-20h				
	8h-9h30				

	Convention de stage				
	Convention d'accueil				
	<b>SUPERVISOR NAME</b>	<b>LAB</b>	<b>TOPIC</b>	<b>STUDENTS</b>	<b>STUDENTS</b>
<b>Lab1.1</b>	BONNET	CBS	Rapid prototyping of genetic logic gates	Nessim	Christelle
	BUFFARD / RADULESCU	LPHI	Semi-quantitative analysis of signaling networks in oncology	Richmond	Sania
	CORTIJO	BPMP	Study of transcriptional variability between cells and between plants	Emilie	
	LEMAIRE	CBS	Search for ligands of NHR-8, a parasitic nematode nuclear receptor, to overcome anti-infectious drug resistance	Ali	Hye-Rin
<b>Lab1.2</b>	NOLLMANN	CBS	Hi-M	Ali	Nessim
	CAMBRAY	CBS	Impact of ribosome recycling on translation	Hye-Rin	Emilie
	BECHARA	IGF	Structural analysis of the interaction between bacterial toxins and human chemokine receptors	Christelle	Sania
	CIANDRINI	CBS	Gene expression economy	Richmond	

## Restitution / Evaluation :

- Lab 1.1 : Oral presentation (~20 mins + questions) in the second half of May (one presentation / group)
- Lab 1.2 : Written report in the second half of may (one report / group)
- Lab 1.1 and 1.2 :
  - Quality of the student's lab book, evaluated by the supervisor. (One lab book per student)
  - Short assessment from the supervisor : student's work, motivation and commitment (for each student)
- All aspects seen in seminars have to be treated in the restitutions
  - Health and safety issues / Environmental impact / Proper statistics, reproducibility / Presentation of the data, bibliography / Open science /...