



LUNDS
UNIVERSITET

Schedule for

Molecular Genetics of Eukaryotic Organisms, 15hp, BIOR49,

31/10 2016 - 13/1 2017

Course organizer: Marita Cohn, 046-222 7256, marita.cohn@biol.lu.se

Course location: Biology buildings A, B and D (Sölvegatan 35)

Literature:

Molecular Biology of the Gene, 7th edition; Watson et al., Pearson Education Inc. 2014 (Cold Spring Harbor Laboratory Press).

Laboratory manuals and additional course material will be handed out at the department for a cost of 100 SEK.

Teachers:

Marita Cohn	MC	Patrik Medstrand	PM
Nathalie Feiner	NF	Karolina Piracs	KP
Bengt Hansson	BH	Allan Rasmusson	AR
Mattias Höglund	MH	Markus Ringnér	MR
Ahu Karademir Andersson	AKA	Carlos Rovira	CR
Cecilia Lundberg	CL	Stefano Secchia	SS

The course will be given in English!

Mandatory parts of the course:

- Introduction on Monday 31 October.
- Introduction to Bioinformatics on Wednesday 2 November.
- Written test (dugga) on Monday 7 November.
- Group studies (indicated GS).
- Laboratory work (indicated Lab).
- Bioinformatics tutorial on Friday 9 December.
- Literature seminars.

If you are absent from a compulsory activity without a valid reason you are not guaranteed to complete this part until the next time the course is offered. A valid reason is e.g. that you are ill, but not that you are travelling!

OBS! This is a full time course. Often no exact finishing times can be given for the labs, but most of the lab days will be full days, until 17.00. The following lab days will be extra long, maybe until 19.00: 21/11, 25/11, 2/12, 6/12.

Course information and the schedule is also found on the course home pages:

<http://www.biol.lu.se/bior49> and <http://liveatlund.lu.se> (log in with your STIL ID)

L: Lecture
GS: Group Studies
Lab: Practical experiments in A267,
 Laborationssal Kärnan, Biologihus A

Locations:

BIOR49, Molecular Genetics of Eukaryotic Organisms
 D205: Föreläsningssal D205, Biologihus D
 D227: Föreläsningssal D227, Biologihus D
 A261: Datorrum A261a, Biologihus A
 A213: Hörsal A213, Biologihus A
 A261b: Föreläsningssal A261b, Biologihus A
 GR: Group rooms, Biologihus B

Day	Time	Location	Activity	Teacher
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Mo 31/10	09.00-10.00 10.30-12.00		L: Introduction (This is compulsory!) L: Genetic brush up	MC MC
Tu 1/11	09.00-10.30 10.50-12.20		L: Gene technology 1: brush up L: Gene technology 2: expression vectors	MC MC
We 2/11	09.00-09.30 09.30-10.45 11.15-12.30 12.30-		GS: Gene expression; introduction mandatory group studies GS: Gene expression; mandatory group studies L: Introduction to Bioinformatics (mandatory) <i>Preparation for group studies (self studies and in your groups).</i>	MC MC, AKA MC
Th 3/11	10.15-11.45 12.30-		L: Gene techn. 3: Identification & characterization of genes I <i>Preparation for written test (self studies) and for group studies.</i>	MC
Fr 4/11	09.00-		<i>Preparation for written test (self studies) and for group studies. Holiday</i>	
Mo 7/11	09.00-10.30 10.45-12.30 13.00-14.30 13.30-15.00		Written test /Dugga (mandatory!) <i>Preparation for group studies (self studies and in your groups).</i> GS: Gene expression 1, grp A, B GS: Gene expression 1, grp C, D	MC, AKA MC, AKA
Tu 8/11	09.00-10.30 10.45-12.15 13.00-		L: Nuclear DNA: classes and organization L: Mobile genetic elements I <i>Preparation for group studies.</i>	AR MC
We 9/11	09.00-10.30 10.45-12.15 13.00-		L: Mobile genetic elements II L: Genetics of organelles I <i>Preparation for group studies.</i>	MC AR
Th 10/11	10.00-11.30 10.30-12.00 13.00-		GS: Gene expression 2, grp A, B GS: Gene expression 2, grp C, D <i>Preparation for group studies.</i>	MC, AKA MC, AKA
Fr 11/11	09.00-10.30 10.45-12.15 12.30-		L: Gene techn. 4: Identification & characterization of genes II L: Comparative genomics <i>Preparation for group studies.</i>	MC BH
Mo 14/11	09.00-12.00 13.00-14.30 13.30-15.00		<i>Preparation for group studies.</i> GS: Gene expression 3, grp A, B GS: Gene expression 3, grp C, D	MC, AKA MC, AKA
Tu 15/11	09.00-10.30 10.45-12.15		L: Biology of retroviruses I L: Gene techn. 5: Identification & characterization of genes III	PM MC
We 16/11	09.30-12.00		Lab: Theory and background for the lab (mandatory!)	MC

Th 17/11	09.00-10.30 10.45-12.15		L: Biology of retroviruses II L: Genetics of organelles II	PM AR
Fr 18/11	09.15-10.15 10.30-11.30 09.00-17.00		GS: Gene expression 4, grp A, B GS: Gene expression 4, grp C, D <i>Theory preparation for lab (self studies) and for group studies.</i>	MC, AKA MC, AKA
Mo 21/11	09.00- late		Lab	AKA, SS
Tu 22/11	09.00-12.00 13.00-15.30 13.30-16.00 16.00 ≈17		<i>Preparation for group studies.</i> GS: Examination, grp A, B GS: Examination, grp C, D Lab (if needed)	MC, AKA MC, AKA AKA, SS
We 23/11	09.00-10.30 10.45-12.15 13.00-13.30 13.30-15.30		L: Chromosome function: Mitosis and meiosis L: Recombination L: Selection of articles for literature seminars (mandatory!) Lab	MC BH MC AKA, SS
Th 24/11	09.00-12.00		Lab	AKA, SS
Fr 25/11	09.00 –10.00 10.00 - 11.30 11.30- late		Lab L: Cell cycle regulation Lab	AKA, SS MH AKA, SS
Mo 28/11	09.00- ≈13		Lab (send samples for sequencing)	AKA, SS
Tu 29/11	09.00-12.00 13.00-14.30		Lab L: Tumor genetics	AKA, SS MH
We 30/11	09.00-10.30 10.45-12.15 13.00 - ≈17		L: Chromatin and gene regulation I L: Developmental genetics Lab	NF KP AKA, SS
Th 1/12	09.00- ≈16		Lab	AKA, SS
Fr 2/12	09.00-10.30 10.30-12.00 13.00- late		Lab L: Chromatin and gene regulation II Lab	AKA, SS NF AKA, SS
Mo 5/12	09.00-10.30 10.30-12.00 13.00- ≈17		Lab L: Transcript detection, with a focus on cancer genetics Lab	AKA, SS MR AKA, SS
Tu 6/12	09.00-12.00 13.00-14.30 14.30- late		Lab L: Chromosome function: telomeres & centromeres I Lab	AKA, SS MC AKA, SS
We 7/12	09.00- ≈17		Lab	AKA, SS
Th 8/12	09.00-09.45 10.00-11.30		Lab L: Gene regulation by non-coding RNA I	AKA, SS CR
Fr 9/12	10.30-12.00 13.00-16.00		L: Chromosome function: telomeres & centromeres II Bioinformatics tutorial: Cancer genomics (Mandatory!)	MC

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Mo 12/12	09.00-10.30 10.45-12.15 13.00- ≈15		L: Gene regulation by non-coding RNA II L: Chromosome function: telomeres & centromeres III Lab	CR MC AKA, SS
Tu 13/12	09.00-10.30 10.30-12.00 13.00-17.00		Lab L: Transgenic organisms & knock-outs Lab Data analysis (work in groups, assistants will visit)	AKA, SS MC AKA, SS
We 14/12	09.00-10.30 10.45-12.00 13.00-14.30 15.00-		L: Gene technology 6: Functional genomics, large scale genome analyses I Lab: Summary of results L: Gene technology 7: Functional genomics, large scale genome analyses II <i>Preparation time for Lab examination (self studies)</i>	MC AKA, SS MC
Th 15/12	09.00-10.30 10.45-12.15 13.00-		L: Gene therapy: Disease-regulated transgene expression in the CNS L: Gene technology 8: Functional genomics, large scale genome analyses III <i>Preparation time for Lab examination (self studies)</i>	CL MC
Fr 16/12	09.00-12.00 13.00-15.30		<i>Preparation time for Lab examination (self studies)</i> Lab: Examination and discussion of results.	AKA, SS
Mo 19/12	09.00-17.00		<i>Preparation for literature seminars (self studies)</i>	MC
Tu 20/12	09.00-12.00 13.15-17.00		<i>Preparation for literature seminars (self studies)</i> Literature seminars, session 1	MC
We 21/12	09.00-12.30 13.15-17.00		Literature seminars, session 2 Literature seminars, session 3	MC MC
Th 22/12 – 8/1			<i>Christmas break 22/12 - 8/1 2017</i> Studies	
Mo 9/1-17	09.00-17.00		Studies	
Tu 10/1	09.00-17.00		Studies Resource time with teachers in their offices; MC & AR 9-10, BH & NF 10-11, CR 11-12	
We 11/1	09.00-17.00		Studies	
Th 12/1	09.00-17.00		Studies	
Fr 13/1	09.00-14.00		Examination	
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Th 23/2	13.00-18.00		Extra examination	