

## Protocol, Organism Biology steering committee meeting

April 17<sup>th</sup> 2024, 13-15

Room A-436

### Attending:

Mattias Thelander (chair)

Georgios Tzelepis

Eula Gems Oreiro

Stefanie Rosa

Martina Leso

Charles Melnyk

Simon Stael

Vahideh Rafieebanadaki (study director without right to take part in decisions)

Katarina Landberg (study director without right to take part in decisions)

### Not attending:

Marisol Sánchez García

Florentine Ballhaus

### §1 Meeting was opened by Mattias Thelander

- a. Katarina was appointed secretary
- b. Georgios was appointed adjutor
- c. The protocol from last meeting was approved.
- d. Additional questions: One additional question was raised, see § 9 below.

### §2 Changes in steering committee

Mattias informed that Eula Gems Oreiro has taken over after Carol as student representative from the Forest Mycology and Plant Pathology department. Mattias has informed the faculty about this and the PhD student council has approved the appointment. Georgios Tzelepis is now a regular member of the steering committee, replacing Salim Bourras. This change has been approved by the faculty (attached to the protocol).

### §3 Final reports from concluded activities

- a. *Molecular methods: from theory to methods and applications (previously called Community profiling by sequencing), autumn 2023:* Vahideh reported that this is a new course given by Karina Clemmensen and Grace Pold from the Forest Mycology and Plant Pathology department, giving 3+1 ECTSs. The first part took place October 13<sup>th</sup> to November 17<sup>th</sup> and the second part December 1<sup>st</sup>, 2023 to January 31<sup>st</sup>, 2024. The course had weekly journal clubs led by students and a teacher as well as an on-campus workshop. The second part was a follow-up activity of the first part with individualized feedback on projects. The course had 16 participants (2 students continued with the second part) and 17 teachers. All participating students have passed both parts. The course is given in collaboration with the research school Focus on Soil and Water. OB had budgeted 90 000 SEK for the course and 68 825 SEK (first part) + 7929 SEK (second part) have been spent. The general opinion for the course was 4.2 / 5. The final report was approved.
- b. *Genome-wide predictions in breeding: genotype-phenotype associations and genomic selection (Plant breeding for sustainable development), autumn 2023:* Katarina reported

that this course, given for the first time, was a collaboration with the SLU breeding network and with Martha Rendon from Plant Biology as the course leader. It was a very comprehensive course given in a hybrid format including three weeks of scheduled activities with teachers and guest lecturers from all SLU faculties. 13 students were registered (10 PhD students, 1 Master student and 2 Postdocs representing all faculties), of which 6 belonged to our research school. So far 8 PhD students have passed the course. Of the budgeted 110 000 SEK, 93 738 SEK was spent. The activity was well received by the students, scoring 4.6 / 5. The final report was approved.

- c. *Understanding and coding the R language, autumn 2023*: Vahideh reported that this course organized by Matt Low at the Ecology research school in collaboration with other research schools, was given on November 6-10, 2023. For in-class sessions, 21 students attended, 15 PhDs from SLU, 3 PhDs from other universities, and 3 post-docs. For online attendance, 10 students enrolled: 6 PhDs (4 from SLU and 2 from other universities) and 4 post-docs. The general opinion about the course was 5 / 5. OB had budgeted 30 000 SEK for this course, which was also spent. The final report was approved.
- d. *How to write and publish a scientific paper, autumn 2023*: Vahideh reported that this course was organized by Marisol and Georgios at the Department of Forest Mycology and Plant Pathology. 10 students registered, but one dropped out. Two students from Plant Biology, two students from Forest Mycology and Plant Pathology and the rest from Molecular Sciences. We had budgeted 70000 SEK for the course, and that was also spent. The general opinion for the course was 4.7 / 5. One student has passed the course so far. The requirement to pass the course is to submit a manuscript to a journal to be considered for publication, and the remaining students are still working on the final details of their manuscripts. The final report was approved.
- e. *Practical skills in sequence analysis, spring 2024*: Katarina reported that this 2 credits course was given in February 2024 by Tomas Linder at Molecular Sciences. 19 students registered (all PhD students), 18 from SLU and 1 from Uppsala University. Seven of them belong to our research school. So far, 5 students have passed the course. The general opinion about the course was 4.2 of 5. The budget for the course was 45 000 SEK and this was also spent. The final report was approved.

#### §4 Status report of ongoing and planned activities

- a. *Visualize your science, spring 2024*: Katarina reported that this 4 credits course, organized in collaboration with Andreas Dahlin at Visualize your Science AB, is running March to May. The 20 slots was filled within a few days after advertising. It will end 14<sup>th</sup> of May with an on-site mini-conference at Ultuna campus, where the students presents and get feedback on their poster.
- b. *Quantitative real-time PCR, spring 2024*: Katarina reported that this course is ongoing right now. It is organized by Alyona Minina at Molecular Sciences and have 8 registered students.
- c. *Annual OB workshop, spring 2024*: Katarina and Vahideh reported that this year's Workshop will take place June 3-4 at Gimo Herrgård. A mail stating dates and venue has been sent out to the OB students. A preliminary program has been put together including three main sessions. One focusing on scientific discussions and networking among the students, and one session called "Carriers outside academia" with inspirational talks by former OB students who have pursued a career outside of academia as well as a talk by Kajsa Risberg, team and recruiting manager of analysis service at Olink company. The committee discussed putative former members to invite to this section. The last session, called "Scientific ways to better health" will be a half day workshop with Jessica Norrbom and Maria Ahlsén, scientists from Karolinska Institute in

Stockholm that do research on how physical training improve mental health and intellectual performance, and who are also running the podcast "Frisk utan Flum".

- d. *Navigating large biological datasets using simple bioinformatic tools, spring 2024*: Vahideh reported that this course will be given by Eduardo Pombe at the Department of Forest Mycology and Plant Pathology. It is the second time that he gives this course. It will be run April 22<sup>th</sup> - 26<sup>th</sup>, 2024. The course has been announced to OB PhD students as well as other PhDs at SLU. So far, 15 students have registered for the course.
- e. *How to become a postdoc workshop, spring 2024*: Katarina reported that this workshop is arranged by all NJ research schools, with the Ecology RS as main organizer. Ecology has informed that, due to new study directors taking over, this workshop will most likely be postponed to autumn 2024.
- f. *Forest pathology, spring 2024*: Vahideh reported that this course was planned to be organized by Malin Elfstrand, Åke Olson and Audrius Menkis at the Department of Forest Mycology and Plant Pathology. However, because of difficulties in finding PhD students for the course, they requested to postpone it. Vahideh will reach out to them to discuss possibilities to broadening the course to make it more interesting for additional students at other Departments.

## §5 Program and budget for autumn 2024, decision

We have in total 791 000 SEK for activities per year. Budgeted for spring was 511 000 SEK, which leaves 280 000 SEK for autumn activities. The study directors suggested the following activities for spring 2024:

Name of activity	Estimated cost (1000 SEK)
Careers outside academia	6
Thesis summary writing workshop	8
PhD Student day	30
To communicate science	20
Understanding and coding the R programming language	30
Analysis of high throughput sequencing RNA-seq data	100
Mycology	80
Popular Science Writing	25
<b>Total sum:</b>	<b>299</b>

It was decided that the study directors should work to realize the suggested activities during autumn 2024. It was also suggested that the study directors investigate additional course(s) to add to the autumn budget to compensate for the postponed spring course Forest pathology (see §4f above), 85 000 SEK.

## §6 Yearly report to the faculty 2023

Katarina informed that the annual report to the faculty was handed in January 31. The report consists of 2 pages with a general description of the activities given with a focus on deviations from the original plan (in the application), planned changes for 2024, and comments on the financial

outcome relative to budget. An excel sheet listing our activities is also included. The report has been approved by the faculty and is attached to this protocol.

### §7 Approval of syllabus for new course, decision

- a. Popular Science Writing, 3 credits. This course will be organized by Tomas Linder at Molecular Sciences and the proposed syllabus was sent out together with the agenda of this meeting and has also been discussed at previous steering committee meetings. The steering committee approved the syllabus. The suggested budget is 50 000 SEK. We have reached out to the other NJ research schools and asked if they want to take part in this course. So far Focus on Food and Biomaterials has accepted the invitation, which results in an OB budget of 25 000 SEK (see §5, budget suggestion for autumn 2024).

### §8 Suggested new courses

- a. *Course on genome editing by CRISPR/Cas9*: Mattias brought up that some Plant Biology PhD students have expressed interest in this kind of course and OB has previously given a similar course with Panos Moschou as organizer. Panos has now moved to Greece and no further course occasion is planned. The committee discussed whether we should give the existing course (PNS0151) again but with a new course leader, or if we should create a new course. It was decided that Simon and Georgios will look into the possibility to give the existing course again, and that the study directors will check the interest among the OB students.
- b. *AI tools in biology, 5 credits*: Katarina informed that Galia from RS Focus on Food and Biomaterials have reached out and asked if OB is interested in joining in giving this new course organized by Alyona Minina together with Jonas Ohlsson (Molecular Sciences) and Jonas Hentati Sundberg (Aquatic Resources). The aim is to introduce AI from the user point of view, with the hope to lower the bar for PhD students in biology to use AI tools in their research. They will also collaborate with AI Sweden (the national competence centre for AI) and SLUBI. The suggested contribution from OB is 40 000 SEK. The committee is positive to the idea and it was decided that Katarina should contact Galia to continue the preparations of this course. It was also brought up that there are plans at SLU centrally to give an overview course on AI and that Alyona and co-workers should contact them to make sure there are no large overlaps in course content.

### §9 Additional questions

Mattias brought up the need for substitutes in the Steering group committee. It is a rule that decisions can only be taken if at least half of the members are present at a meeting. Half of the steering group members also need to be docents. Since there are quite a few cancellations from time to time it would be good if these can be filled with substitutes so that decisions can be taken at each meeting. Mattias suggested that the committee has one PhD student substitute from each Department and one senior (docent) substitute from each department. The committee approved. It was decided that the PhD students bring this up at their respective departmental PhD student meetings and come up with a student substitute each. Likewise, the senior representatives will come up with a senior substitute from each Department and get the suggestion approved by the respective Head of Department. When Mattias gets all substitute suggestions he will take care of the formalities towards the faculty.

## §10 Next meeting

The next meeting will take place May 28<sup>th</sup> at 10-12 in room A402.

### Attachments:

- a) Decision from FUN-NJ, Change in Steering group for the research school Organism Biology
- b) OB yearly report to the faculty 2023

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Katarina Landberg, secretary

Date and Place

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Georgios Tzelepis, adjutor

Date and Place



Fakulteten för naturresurser och  
jordbruksvetenskap  
Nämnden för utbildning på forskarnivå  
(FUN-NJ)

**BESLUT PER CAPSULAM**  
2024-01-19

## Byte av ordinarie styrgruppledamot för forskarskolan Organismbiologi /Change of regular steering group member for the research school Organism biology

### Beslut/Decision

Nämnden för utbildning på forskarnivå beslutar:

att ersätta Salim Bourras (inst. för skoglig mykologi och växtpatologi) som ordinarie styrgruppledamot med Georgios Tzelepis (inst. för skoglig mykologi och växtpatologi) för forskarskolan Organismbiologi från och med januari 2024 tillsvidare, dock längst till och med 31 december 2025 med möjligheter till förlängning.

Doctoral Education Committee decides:

to replace Salim Bourras (Dept. of Forest Mycology and Plant Pathology) as regular steering committee member with Georgios Tzelepis (Dept. of Forest Mycology and Plant Pathology) for the research school Organism Biology from January 2024 until further notice, however no later than 31<sup>st</sup> of December 2025 with possibilities for extension.

### Redogörelse för ärendet/Background

Institutionen har fattat beslutet att byta ut Salim Bourras som ordinarie styrgruppledamot. Georgios Tzelepis är tillfrågad och står till förfogande.

The department has made the decision to replace Salim Bourras as regular steering group member. Georgios Tzelepis has been asked and is available.

*Följande ledamöter har tillstyrkt beslutsförslaget/Following members have approved of the decision:*

Magnus Huss  
Ingrid Öborn  
Cecilia Sundberg  
Gordana Manevska Tasevska  
Jesper Larsson  
Petra Fransson  
Erica Packard  
Piera Wiesinger

I tjänsten

Sabine Sampels  
Utbildningshandläggare

### **General description of activities with a focus on deviations that have occurred in relation to the original plan**

The Organism Biology research school has successfully completed 18 activities in 2023, of which six were given for the first time. Two of the new courses, "Application of NMR spectroscopy for Protein Structure Elucidation (5 HEC)", given in collaboration with the research school Focus on Food and Biomaterials, and "Applied population genetics in plant disease epidemiology (2.5 HEC)" were given in the very beginning of 2023 with funds moved from 2022 (as agreed with FUN-NJ). The new course "Animate your science (4 HEC)" teaches how to create 3D images and models and how to animate research for publication purposes. It was given in collaboration with Andreas Dahlin at Visualize your Science and was filled to the last place. "Navigating large biological datasets using simple bioinformatics tools (2.5 HEC)" given by Edoardo Pimbo at the dept. of Forest Mycology and Plant Pathology was also well received and we are planning for one more course occasion in 2024. We were also very happy to launch the new course "Genome-wide predictions in breeding (5 HEC)" (titled "Plant breeding for sustainable development" in the original activity plan), a collaboration with the SLU breeding network and with Martha Rendon as course leader. Finally, we gave the new course "Molecular methods: from theory to methods and applications (3 HEC)", a revised form of "Community profiling by sequencing" which was postponed 2022, in collaboration with the research school Focus on Soil and Water. A second course occasion of Visualize your Science was also given in autumn, a very popular course which we fill up with SLU PhD students each time. We are also very happy that our first Annual Organism Biology workshop after the Covid pandemic was successfully completed in June, with a focus on mental health and social activities.

### **Planned changes for 2024**

The course "Forest pathology" was originally planned for 2023, but has been moved to 2024. As mentioned above, we are also giving another course occasion in spring 2024 of the new course from 2023 "Navigating large biological datasets using simple bioinformatics tools (2.5 HEC)", since there is a demand from the students. Furthermore, the Organism Biology students will realize another occasion of the PhD student networking workshop in autumn, together with the students from Focus on Food and Biomaterials, similar to the one given 2022.

For the upcoming year, we are also in the planning phase of a few new activities. A new course called "Popular science writing for researchers", with Tomas Linder at Molecular Sciences as course leader, and most likely in collaboration with additional NJ research schools, will be offered. Together with the research school Focus on Food and Biomaterials we are also looking into the possibility to give a course on AI-based tools for image analysis and protein engineering in collaboration with Alyona Minina at Molecular Sciences.



### **Compliance, budget vs financial outcome for 2023:**

The financial outcome for 2023 differs from what was budgeted due to the deviations in the planned activity range described above. Taken together, as previously communicated to and orally approved by Petra Fransson at NJ-FUN, we overdraw the allocated funding for activities somewhat due to the addition of several new courses. The main deviations were:

- Funding not spent, due to canceled/postponed courses and activities:
  - 85 000 SEK (Forest pathology)
  - 90 000 SEK (Root-soil-microbe interactions)
- Costs for extra activities not in the original application budget:
  - 68 825 SEK for Molecular methods: from theory to methods and applications
  - 50 000 SEK for Navigating large biological datasets
  - 62 942 SEK for Animate your Science
  - 80 000 SEK for a second course occasion of Visualize your Science
- The cost for How to become a postdoc was taken by the main organizers, so the 6000 SEK budgeted for by OB was not spent. Instead, OB took extra costs for the two workshops Careers outside academia (11 000 SEK instead of 6000 SEK) and Thesis summary writing (8000 SEK instead of 6000 SEK)
- Courses from 2022 moved to the first quarter of 2023 (covered by allocation from 2022 (minus 10% tax) in line with approval from FUN):
  - 36 000 SEK for Application of NMR spectroscopy for Protein Structure Elucidation
  - 76 500 SEK for Applied population genetics in plant disease epidemiology
- As reported via E-mail in December, part of the costs for the following courses, which ended in December 2023, failed to be registered before the 8th of Dec (last day for internal invoices) and might therefore be accounted for in January 2024 as far as we understand it:
  - Analysis of High Throughput Sequencing RNA-Seq data (100 000 SEK)
  - Genome-wide predictions in breeding (88 800 SEK)
  - Molecular methods: from theory to methods and applications (We have spent 117 000 SEK, but the research school Focus on Soil and Water will compensate us with 48 175 SEK, yet to be registered)

Katarina Landberg  
Study director

Vahideh Rafieebanadaki  
Study director

## Report of education activities performed by a research school 2023

Number	Name of activity	Year when the activity was performed	Type of activity (K=course; S=seminar; W=workshop; T=study trip; I=internal coop; X=external coop; M=miscellaneous)	HEC (if course with course plan)	Total number of participants	Number of participating PhD students	Number PhD students that passed the exam if the activity was a the course	Number of participating PhD students from NU-faculty	Number of participating PhD students from SLU	General course evaluation (value from question 1 in course evaluation template)	Mark with 1 if activity was arranged in cooperation with another research school								Name of external partner(s)	Comments	
											Ecology	Focus on Food and Biomaterials	Focus on Soils and Water	Organism Biology	Society and Landscape	Social Science Persp. on Sust. Dev.	Sustainable systems for food, energy and bio	Other SLU research school			
1	Application of NMR spectroscopy for Protein Structure Elucidation	2023	K, X, I	5	7	6	6	5	5	4,8										2 lecturers from Göteborgs universitet and from Bruker (Switzerland)	
2	Applied population genetics in plant disease epidemiology 23	2023	K, I	2,5	19	13	9	9	14	4,1										Lizel Potgieter, SLUBI	
3	Information meetings with OB PhD students	2023	M		ca 30	30		30													
4	Visualize your Science Spring 23	2023	K, X	4	20	20	13	7	20	4,8										Andreas Dahlin at Visualize your Science	
5	Animate your Science Spring 23	2023	K, X	4	10	10	5	5	10	5,0										Andreas Dahlin at Visualize your Science	
6	Navigating large biological datasets using simple bioinformatic tools	2023	K, X	2,5	12	9	4	5	9	5,0										Sandra Lorena Ament-Velásquez, Stockholm University	
7	Confocal Microscopy 2023	2023	K, X	5	13	5	5	5	5	4,8		1		1						Christiane Peuckert, SU and Hans Blom, KTH	
8	How to become a postdoc	2023	W, X		39	35		35		4,3		1	1	1	1	1	1			Erik Olm from VR and Malin Elfstrand and Giulia Vico	
9	Annual Workshop 2023	2023	W, X		20	12		12	12	4,9										Åsa Burman, Finish on Time, Pernilla Elander, Länsstyrelsen Stockholm	
10	To communicate science	2023	K, I, X	2	9	9	6	7	9	4,9	1	1	1	1				1		Lennart Wikström, CultimediaAB; Lotta WaesterbergTomasson, Communications Strat egistat Public & Science (Vetenskap&Allmänhet); Anton Lif, Security & Continuity Management, Security Governance   Business Continuity, CombitechAB	The overall aim of this course is to equip students with skills and tools for effective communication of their scientific results with the media. This course is given jointly with other research schools, the Planning Division and The Division of Communication at SLU. External partners - 3 teachers from outside of SLU
11	Careers outside academia	2023	W, I, X		59	38		33	33	4,3	1	1	1	1	1	1	1			Adriana Giongo, Karin Benmarker, Marita Teräs från Naturvetarna, Alison Sjöström Verito konsult, Sara Hosseini Olink	
12	Genome-wide predictions in breeding 2023 (Plant breeding for	2023	K, I	5	13	9	8	4	9	4,3											
13	Molecular methods: from theory to methods and applications	2023	K, S, T	3	16	14	14	7	9	4,2			1	1							
14	Analysis of High Throughput Sequencing RNA-Seq Data	2023	K, I	3 + 1,5	34	13	6	9	13	4,4										Co-organized with Nicolas Delhomme at SLUBI	
15	Visualize your Science Autumn 23	2023	K, X	4	14	14	9	9	14	5										Andreas Dahlin at Visualize your Science	
16	Thesis summary writing workshop	2023	W, I		37	37		26	37	4,4	1		1	1							
17	Understanding and coding the R language	2023	K, I	3	31	24	5	18	19	5,0	1		1	1	1						
18	How to write and publish a scientific paper	2023	K	4,5	9	9	0	8	9	4,7											None of the students have passed the course yet, since the requirement is to submit a manuscript to a journal to be considered for publication.

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