Project Deliverable

D2.1 OLISSIPO Schools, Workshops, and Invited lecture series programme

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Executive Summary

This deliverable outlines the scientific events such as schools, workshops, and the invited lecture series. These actions are in line with the objectives of OLISSIPO, in particular, to establish a leading pole of excellence in Computational Biology at INESC-ID and support regional initiatives under the SMART specialization strategy for Lisbon and Portugal.

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1. Introduction

The organization of schools and workshops will cover the strategic areas identified in OLISSIPO and target the scientific community and participants from the industry. The OLISSIPO invited lecture series, the computational biology seminars, will profit from the experience of several experts involved in this project.

Although these events would hardly happen presentially within 2021, since work travel has been severely restrained in the context of the COVID-19 pandemic, the interaction among OLISSIPO institutions should be promoted. In line with this, some of these activities will be postponed, and others will be organized (online) to encourage institutions' interaction during this first year.

It is important to note that this situation is extremely dynamic, and the events proposed here are tentative and might change depending on the evolution of the measures in these four countries (Portugal, France, Switzerland, and German). Therefore, we will keep an updated review of this programme continuously throughout the project.

1.1 Deliverable objective

This deliverable describes the planned programme of schools, training workshops, and invited lecture series of OLISSIPO.

2. OLISSIPO Schools, Workshops, and Invited Lectures

2.1 OLISSIPO Schools and Workshops

The objectives of both the schools and the training workshops are:

- To provide INESC-ID and Portugal more in general with wider access to the research done in other European countries and internationally;

- To give INESC-ID and Portugal more, in general, an opportunity to show the excellent quality of the training it provides and of the research it develops and thus make it more attractive for young researchers to stay or to come to study in Portugal and to apply there for a postdoc or for permanent positions;

- To help INESC-ID and Portugal more in general and the other partners of OLISSIPO to identify research projects that could be submitted in the future, involving all or some of the partners of OLISSIPO but also possibly other research groups in Europe and at the international level.

At each occasion, whether School or Training Workshop, we also intend, if possible, to invite people from the management of IST-University of Lisbon, and of other institutions in Portugal as well as of FCT to try to make aware of the problems faced by researchers in general in Portugal, and by Early Stage Researchers more in particular, notably the difficulty of getting a permanent research position in Portugal which leads to a loss of such young researchers to other countries worldwide.

In order to reach the above objectives and intentions, notably in relation to INESC-ID and to Portugal, we consider that it is better all schools and training workshops take place in Lisbon.

The Schools and Training Workshops cover the identified Strategic Areas in Computational Biology. The Schools will run during 4.5 days, and Training Workshops correspond to a shorter format of 3 days. Since it is highly desirable that these events occur face-to-face and given the current uncertainty regarding the evolution of the COVID-19 pandemic situation, we decided to postpone those that were planned for 2021.

2.1.1   OLISSIPO Schools

Main topics School 1: Single-cell analysis, modelling and simulation
Main topics School 2: Mathematical modelling of inter-cell and communities' interactions
Main topics School 3: Computational phylogenetics of cells and communities
Main topics School 4: Translational bioinformatics, data management and software development

Two of the Schools should be organised in 2022, and two in 2023. The planned periods would be in the Spring and in the Fall.

General format for each school: Each time, 4 Keynote Lecturers, each having 3h of class to give, questions included.

General schedule:

The times considered here are UTC times. In France, Germany, and Switzerland (UTC+1), it would be one hour more.

Sunday: Welcome cocktail followed by dinner

Monday:

      9h-9h30: General introduction to the school

      9h30-11h: 1st class by Keynote Lecturer 1

      11h-11h30: Coffee break

      11h30-12h30: Contributed presentations by Early Stage Researchers

      12h30-14h30: Lunch

      14h30-16h: 1st class by Keynote Lecturer 2

      16h-16h30: Coffee break

      16h30-18h: Poster session with coffee

      20h: Dinner

Tuesday:

      9h30-11h: 1st class by Keynote Lecturer 3

      11h-11h30: Coffee break

      11h30-12h30: Contributed presentations by Early Stage Researchers

      12h30-14h30: Lunch

      14h30-16h: 1st class by Keynote Lecturer 4

      16h-16h30: Coffee break

      16h30-18h: Poster session with coffee

      20h: Dinner

Wednesday:

      9h30-11h: 2nd class by Keynote Lecturer 1

      11h-11h30: Coffee break

      11h30-12h30: Contributed presentations by Early Stage Researchers

      12h30-14h30: Lunch

      14h30-20h: Excursion / Visit of institution where the School is taking place + Dinner

Thursday:

      9h30-11h: 2nd class by Keynote Lecturer 2

      11h-11h30: Coffee break

      11h30-12h30: Contributed presentations by Early Stage Researchers

      12h30-14h30: Lunch

      14h30-16h: 2nd class by Keynote Lecturer 3

16h-16h30: Coffee break

16h30-17h30: Poster session with coffee

20h: Dinner

Friday:

9h30-11h: 2nd class by Keynote Lecturer 4

11h-11h30: Coffee break

11h30-12h30: General discussion

12h30-14h30: Lunch/Departures

2.1.2   OLISSIPO Workshops

2.1.2.1 Initial Workshop associated with ISMB-ECCB 2021 (online)

General format: 4 Keynote Speaker, each 1h questions included. The schedule was chosen to allow people in the US, including in the West coast, and maybe even people from Asia-Australia-New Zealand to participate as one of the Keynote Speakers, and in general, as attendees.

Notice that any of the Keynote Speakers invited for this initial virtual Workshop may be re-invited for one of the Schools or Training Workshops.

General schedule:

The times considered here are CET times. In Portugal, it would be one hour less.

14h: Welcome

14h30-15h30: 1st Keynote Speaker

15h30-16h30: 2nd Keynote Speaker

16h30-17h30: Coffee break

17h30-18h30: 3rd Keynote Speaker

18h30-19h30: 4th Keynote Speaker

Depending on the Keynote Speakers, the above schedule could be shifted by half an hour, a maximum of one hour later, thus starting (resp. ending) at 14h30 or 15h (resp. 20h or 20h30).

2.1.2.2 Training Workshops

Main topics Training workshop 1: Single-cell analysis, modelling and simulation

Main topics Training workshop 2: Mathematical modeling of inter-cell and communities' interactions

Main topics Training workshop 3: Computational phylogenetics of cells and communities

Main topics Training workshop 4: Translational bioinformatics, data management and software development

Two of the Training Workshops should be organised in 2022, and two in 2023. The planned periods will depend on the precise dates of the Schools so as not to be too close to them, yet in periods that are nice and possible for those who teach.

General format for each school: Each time:

4 Keynote Speakers, each having 1h questions included;

2 persons to speak about project calls from Europe or International (for instance, Human Frontier), 1 person to provide information on academic positions in general, 1 person to provide information on academic positions in Portugal, 1 person more specifically engaged with data management and software development, and 2 persons from Industry, a total of 7 persons each having 1h30 questions included.

The 2 Poster sessions could become 1 hour of very short presentations (5 min maximum each) to incite people to then go look at the posters for 1h30.

General schedule:

Tuesday: Welcome cocktail followed by dinner

Wednesday:

9h-9h30: General introduction to the (Training) Workshop

9h30-10h30: 1st Keynote Speaker

10h30-11h: Coffee break

11h-12h30: Presentation on European and International Project Calls + Discussion

12h30-14h30: Lunch

14h30-15h30: 2nd Keynote Speaker

15h30-16h: Coffee break

16h-17h30: Presentation of information on academic positions in general

17h30-19h: Poster session with coffee

20h: Dinner

Thursday:

9h30-10h30: 3rd Keynote Speaker

10h30-11h: Coffee break

11h-12h30: Presentation on European and International Project Calls + Discussion

12h30-14h30: Lunch

14h30-15h30: Presentation by Industry

15h30-16h: Coffee break

16h-17h30: Presentation of information on academic positions in Portugal

17h30-19h: Poster session with coffee

20h: Dinner

Friday:

9h30-10h30: 4th Keynote Speaker

10h30-11h: Coffee break

11h-12h30: Presentation by Industry (or Presentation by person more specifically involved in data management and software development)

12h30-14h30: Lunch

14h30-16h: Presentation by person more specifically involved in data management and software development (or Presentation by Industry)

2.2 OLISSIPO Invited Lectures

OLISSIPO Twin Seminars (initially in-classroom teaching): This series will be moved online during the first project year and will include stronger participation of the INESC-ID Team (ERS, staff, Senior Researchers) than initially defined. The rationale is to foster collaboration between the Teams despite the travel restrictions expected during 2021.

These seminars will be organized to include two short presentations (20-30 min/each), one from a Lecturer from the Lisbon team followed by a second presentation from a twin international researcher working on similar topics; a discussion open to the public will follow to

further promote the interaction between all the participants. These lectures should include experts from a specific subject related to the project strategic areas in Computational Biology previously identified.

The seminars will be opened to everyone interested and may be further disseminated in a dedicated YouTube channel (upon the agreement of all the participants). The moderator/host can select the chat questions to discuss at the end of the lectures. This action will occur once every 2 months and is planned to start in May 2021. It is expected that the OLISSIPO Twin Seminars can contribute to disseminate the scientific work and expertise of INESC-ID and all the Consortium and contribute to attracting new talented researchers.

Year	Month	Speakers	Topic
Year 1 (online)	May	To be defined	*Sparse regularization for omics data*
	June		*Algorithms for phylogenetics*
	July		*Artificial intelligence in bioinformatics*
	October		To be defined
	November		To be defined

We expect that the OLISSIPO Twin seminars will be moved to presentially in Years 2 and 3. Thus, more information about the schedule, speakers and topics will be updated during the project.

Important Note: Work travel will be reinforced in 2022 to compensate for the forced reduction of these activities in 2021.