

Workshop on Zebrafish Development and Mutagenesis Screening

MPI for Developmental Biology, Tübingen – 20th - 24th September 2004

Background and aims of the workshop

In preparation of the ZF-MODELS mutagenesis screens, the Max Planck Institute for Developmental Biology will host a workshop on zebrafish development and mutagenesis screening. This workshop is primarily aimed at junior scientists with limited experience in working with zebrafish. It is intended to allow those participating in the screening to better assess the morphology of organs / structures they are not familiar with and hence be able to compile more comprehensive and more precise phenotypic descriptions of the mutants identified.

To this aim, there will be lectures and demonstrations by experienced scientists specializing in different organs / structures. Moreover, different phenotypic classes identified during earlier mutagenesis screens will be presented to allow inexperienced screeners to familiarize themselves with different phenotypes commonly observed in mutagenesis screens and to enable them to better separate specific from non-specific phenotypes.

Importantly, the workshop will allow those participating in the Tübingen mutagenesis screen to familiarize themselves with the Tübingen zebrafish facility and to optimise their own assays under “real-world” conditions by participating in a “test screen”. In order to plan such a “test screen” (e.g. to have embryos / larvae at the required stage etc.), participants are expected to contact Brigitte Walderich (brigitte.walderich@tuebingen.mpg.de) at least 3 weeks prior to the start of the workshop.

In addition to these practical aspects, there will be introductions to the screen databases used to store information on the mutants identified during the screen(s) and to the nomenclature for phenotypic descriptions (incl. the ZFIN / PATO controlled vocabulary).

Finally, there will be talks on aspects related to the screen, such as strategies for mutagenesis, TILLING, genomic resources for the mapping and cloning of zebrafish mutants and microarray technology.

Please note: We would welcome it if all junior staff participating in the Tübingen screen could attend this workshop. For details on how to apply, please see below.

Workshop contents

Test screening

Familiarization with Tübingen zebrafish facility and optimisation of own assays under “real-world” conditions (participation in a test screen; Brigitte Walderich)

Lectures and demonstrations on zebrafish development and morphology

The (tentative) list of different organ and structures to be covered by the workshop include, for example: Brain, neural crest, muscles, cranio-facial cartilage, ear and lateral line, eye and visual behaviour, skin, pigmentation, digestive tract, tumour, immune system & microglia.

Participants intending to participate in the Tübingen screen are asked to briefly introduce their assay(s) when “their” organ / structure is being discussed.

Phenotypic classes

Familiarize with different phenotypes to be able to better assess mutant phenotypes during the screen.

The demonstrations on different organs and phenotypic classes are also intended to produce a list of commonly observed phenotypes in the different organs / structures being discussed. This list will form the basis for a check list, which will be included in the interface used to enter phenotypic descriptions into the screen database. This check list will serve two purposes:

1. It will serve as a reminder to check for phenotypes outside of the organ / structure directly screened for.
2. It is intended to ensure that the phenotypic descriptions entered are as comprehensive as possible (with little effort required to cover phenotypes in a wide range of organs / structures).

Talks

The (tentative) list of talks includes: Strategies for mutagenesis in the zebrafish / TILLING (Freek van Eeden; Utrecht); Genomic resources for the mapping and cloning of zebrafish mutants (Robert Geisler, Tübingen); Microarray analyses (Georg Otto, Tübingen); Introduction to screen databases (Brigitte Walderich, Tübingen); Nomenclature for phenotypic descriptions incl. ZFIN / PATO controlled vocabulary (Robert Geisler, Tübingen).

Tentative workshop schedule

Date	Content	Participants
Day 1: Monday, 20 th Sept.	Test screening Lectures and demonstrations on zebrafish development and morphology Tutorials on different phenotypic classes Talks	External teacher(s): TBA Internal teacher(s): TBA Workshop participants (ZF-MODELS & non-ZF-MODELS)
Day 2: Tuesday, 21 st Sept.		
Day 3: Wednesday, 22 nd Sept.		
Day 4: Thursday, 23 rd Sept.		
Day 5: Friday, 24 th Sept.	Screen Planning Meeting: Presentation of assays; discussion on combination / admission of assays; decisions on initial assays and screening timeline	All PIs (or their representatives) planning to participate in the Tübingen mutagenesis screen; workshop participants

Practical Information

Dates of the workshop

Monday, 20th September – Friday, 24th September 2004

(the last day of the workshop being the screen planning meeting during which screen participants present their assays)

Location

The workshop will be hosted by the Max Planck Institute for Developmental Biology in Tübingen, Germany.

Address:

Max-Planck-Institut für Entwicklungsbiologie
Spemannstr. 35
D-72076 Tübingen
Germany

For a description of how to reach Tübingen and the MPI campus, please see:

<http://www.eb.tuebingen.mpg.de/visitors/>.

All activities of the workshop will take place in the main building of the MPI for Developmental Biology, Spemannstr. 35. The demonstrations will be in the institute's course room (basement; near the main entrance), lectures will be held in the seminar room (near the main entrance) and the screening / testing of assays will take place in the fish house.

Accommodation

The Max Planck Guest House (on campus, opposite the MPI for Developmental Biology) offers a limited number of single rooms as well as shared apartments. For details on the Max Planck Guest House, please see: <http://www.mph.tuebingen.mpg.de/eng/>.

Alternatively, the Hotel Katharina*** is located in the vicinity of the Max Planck Campus. Please see <http://www.cityinfony.de/tuebingen/hotel/katharina/> for more information. For further hotels in Tübingen, please see <http://www.tuebingen.de/1566.html> (this page is in German only, but the individual hotels often have English pages too).

If you would like to book a room in the guest house or a hotel, please send an email to Shyamala Subramanian (shyamala.subramanian@tuebingen.mpg.de) stating:

- which hotel / guest house you would like to stay at
- the day and approximate time of your arrival
- the day of your departure
- which type of room you would like, i.e. single / double / shared apartment (Max Planck Guest House)

Fees

Participants from the ZF-MODELS Consortium: There will be no fees for the workshop and no charges for accommodation (except for additional expenses, such as consumption from the bar, telephone calls etc., which have to be covered by the participants).

However, expenses for travel to Tübingen and subsistence have to be covered by the participants themselves.

Participants from outside the ZF-MODELS Consortium: There will be no fees for the workshop. However, participants have to cover the cost of accommodation, board and travel.

How to apply

Graduate students and junior postdocs planning to participate in a zebrafish screen are eligible to apply for this workshop. In your application, please include a covering letter briefly stating your research interests and reasons for wanting to participate in this workshop, a brief academic CV as well as a letter of support from your supervisor.

The deadline for applications is 1st September 2004.

Please note: As the workshop is part of the European Commission-funded ZF-MODELS project, only applications from junior scientists working in a European zebrafish lab can be considered. Due to limitations in space, the number of participants is restricted to a maximum of 12 participants.

Applications should be sent to:

Ralf Dahm
Max-Planck-Institute for Developmental Biology
Spemannstr. 35
D-72076 Tübingen
Germany

If you have any questions regarding the workshop, please feel free to contact Ralf Dahm by email (ralf.dahm@tuebingen.mpg.de) or by phone (+49 - (0)7071 - 601-444).