

## AGENDA

### 6<sup>th</sup> Short Course in Toxicologic Pathology in Fish

Heidelberg, July 22 – 24, 2025

| Tuesday (July 22, 2025) |                                 |  |
|-------------------------|---------------------------------|--|
| 08:30 *                 |                                 | Registration & Coffee  |
| 09:00                   | Welcome                         | Objectives and overview of the agenda  |
| 09:15                   | Participants                    | Lecturer and participant introductions; expectations   |
| 09:40 – 10:00           | Lecture                         | Where to apply histopathology in fish toxicology, and which organs to study? (Helmut Segner)   |
| 10:00 – 10:30           | Lecture                         | Overview on technical aspects of histology: From the fish to the slide (Lisa Baumann)  |
| 10:30                   | Coffee break                    |  |
| 11:00                   | Lecture                         | Fixation and preparation methods (Thomas Braunbeck)  |
| 11:50                   | Lecture                         | Why are histological sections so colorful? Principles of staining (Helmut Segner)  |
| 12:10                   | Lunch break                     |  |
| 13:30                   | Lecture                         | Normal anatomy and histology of zebrafish adults and early life stages (Jeff Wolf, Heike Schmidt-Posthaus)   |
| 15:00                   | Coffee break                    |  |
| 15:30 – ~17:00          | Demonstration & guided exercise | Normal anatomy and histology of fish (rainbow trout, zebrafish, medaka and fathead minnow adults and early life stages (Jeff Wolf, Heike Schmidt-Posthaus, participation of all) |
| 18:00                   | Social                          | Organized by local organizers  |

\* Time schedule includes ample time for questions and discussion

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### 6<sup>th</sup> Short Course in Toxicologic Pathology in Fish

Heidelberg, July 22 – 24, 2025

| Wednesday (July 23, 2025) |                       |   |
|---------------------------|-----------------------|---|
| 08:30                     | Warming up            |   |
| 9:00 – 9:50               | Lecture               | Applications in toxicity studies with embryonic and transgenic fish (Thomas Braunbeck, Lisa Baumann)        |
| 09:50                     | Participant Exercise  | Use of “tissue identification checklist” to examine normal tissues (all)                                    |
| 11:00                     | Coffee break          |   |
| 11:30                     | Lecture               | Background lesions and common diseases in laboratory fish, with focus on zebrafish (Heike Schmidt-Posthaus) |
| 12:15                     | Guided exercise       | Background lesions and common diseases in laboratory fish, slide evaluation (Heike Schmidt-Posthaus)        |
| 13:00                     | Lunch break           |   |
| 14:00                     | Lecture               | Semiquantitative grading of histopathological lesions (Jeff Wolf)   |
| 14:45                     | Lecture               | Quantitative pathology (Jeff Wolf)  |
| 15:15                     | Coffee break          |   |
| 15:45                     | Lecture               | Automation in (toxicological) histopathology (tbd; Daniela Pampanin online?)                                |
| 16:15                     | Supervised self-study | Use of “tissue identification checklist”  |
|                           |                       |   |
|                           | Social                | Self-organized by participants  |

\* Time schedule includes ample time for questions and discussion

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### 6<sup>th</sup> Short Course in Toxicologic Pathology in Fish Heidelberg, July 22 – 24, 2025

| Thursday (July 24, 2025) |                         |   |
|--------------------------|-------------------------|---|
| 08:30                    | Warming up              |   |
| 09:00                    | Lecture                 | Histopathology of endocrine disruptors, case studies of estrogen and thyroid disruptors (Lisa Baumann, Helmut Segner) |
| 09:45                    | Guided exercise         | Fish gonad and thyroid histopathology (all)   |
| 10:30                    | Coffee break            |   |
| 11:00                    | Lecture                 | Mis-diagnoses and missed diagnoses – challenges in toxicologic pathology with fish (Jeff Wolf)                        |
| 11:30                    | Lecture                 | Current uses of histopathology in monitoring and environmental assessment of oil and gas explorations (David Groman)  |
| 12:00                    | Lunch break             |   |
| 13:00                    | Lecture                 | Field analysis and protocols for investigating toxicological fish kills (David Groman)                                |
| 13:30                    | Lecture                 | Case study: Assessment of toxicological induce hemolytic anemia in Atlantic salmon (David Groman)                     |
| 14:15                    | Coffee break            |   |
| 14:45                    | Supervised self-studies | Incidents/slides of the participants  |
| 15:30                    | Overview                | Overview, review, feedback, suggestions, future...  |
| 16:00                    | End                     |   |

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