Humane endpoints in regulatory toxicology in fishes

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Introduction

The RSPCA convened a meeting in November 2023, as part of the 'Focus on Severe Suffering' initiative, on the need for improved humane endpoints in fish toxicology studies. Participants concluded there is currently insufficient guidance on identifying sub-lethal clinical signs, and applying humane endpoints, for fishes used in regulatory toxicology tests such as OECD 203 and 210. The development of standardised practices would not only improve animal welfare, but also help ensure data reliability and regulatory compliance. The targeted recommendations below aim to significantly reduce suffering in fish used in toxicology research. A full meeting report can be downloaded using the QR code at the end of this poster.

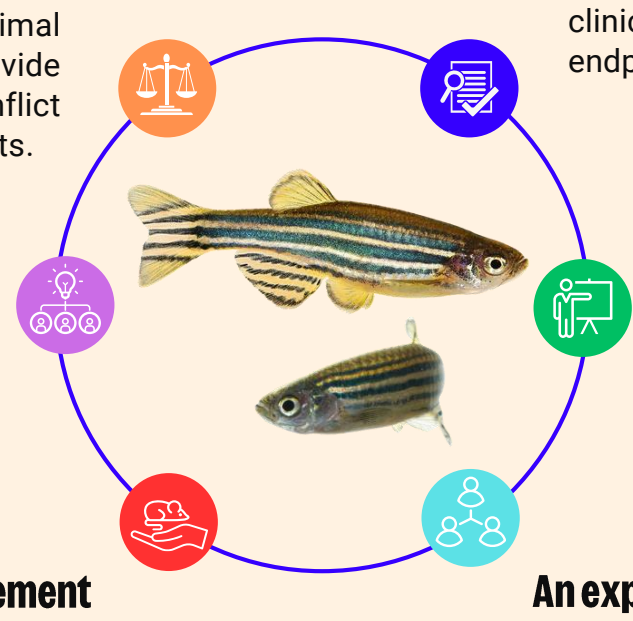
The roles of relevant groups

National regulators of animal use

should ensure full enforcement of legislation which mandates that animal suffering should be minimised, and provide guidance where this may appear to conflict with some international test requirements.

Regulatory bodies (such as OECD)

should contribute to guidance on identifying clinical signs and applying humane endpoints, to help minimise suffering.



The scientific community

helps shape good practice by developing and validating better methods for assessing clinical signs and humane endpoints - and should share good practice with networks of colleagues.

Training organisations

should collaborate with regulatory bodies and scientific institutions to ensure they are aligned with best practices.

Animal unit management

are crucial for implementing clear SOPs, monitoring animal welfare, ensuring compliance with regulations, and training those responsible for monitoring animals.

An expert stakeholder group

dedicated to address this specific issue, including a range of perspectives and expertise, should be formed to advance the recommendations listed below.

Recommendation 1:

Design and implement standardised approaches to identify sub-clinical signs and apply humane endpoints - this needs:

- Monitoring frameworks with standardised guidelines for assessing fish behaviour and clinical signs.
- A standardised language with consistent terminology to describe fish behaviours and clinical signs.
- Collaboration among organisations and sharing of best practices, research findings, and experiences.

Recommendation 2:

Establish standardised approaches to staff training on clinical signs and fish behaviour and welfare - this needs:

- Training programmes that focus on species-specific behaviors and welfare indicators.
- CPD-friendly courses with flexible formats to make training more accessible.
- Emphasis on the Culture of Care within training frameworks, to ensure staff are equipped with compassion as well as technical skills.

Recommendation 3:

Promote collaboration and information sharing networks within the scientific community - this needs:

- Engagement between scientific researchers, animal technologists, and regulators on standardisation of indicators and humane endpoints.
- Collaborative platforms for sharing information.
- A comprehensive global guidance system for fish welfare in toxicology studies that includes indicators, minimum standards, and definitions of clinical signs.

Conclusion

Achieving the above will require initiatives by, and collaborations between, various stakeholders. We believe that all groups should actively commit to preventing fishes from experiencing avoidable harm in regulatory toxicology tests. Tailored actions for each stakeholder group are listed in the full report, accessed via the QR code.

FOCUS ON SEVERE SUFFERING