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Using Zebrafish to Do Good: Scientific Data Management

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Using Zebrafish to do Good Scientific Data Management

Case Study of Scientific Research Data Management for Promoting E-Science

Modules for Managing Research Data: Seven Data Management Principles outlined in the *New England Collaborative Data Management Curriculum*

Module 2: **Types, Formats & Stages of Data**

- The challenges in conducting a multiyear research project with living specimens
- Instrument data that needs to be exported to a common or open format for analysis, storage, etc.
- Data in digital and paper formats
- Paper lab notebook inconsistencies and lack of standardization

Module 3: **Contextual Details**

- No use of a data dictionary
- No file naming conventions
- Lack of synchronization between data sources
- No standards for data documentation

Module 4: **Data Storage, Backup and Security**

- Use of personal computers
- No plan for storage of data files
- No security and backup plan for digital and hardcopy data (lab notebooks)

Module 5: **Legal and Ethical Issues**

- IACUC-related documentation and compliance
- Need to clarify funding purposes (NIH vs. private)

Module 6: **Data Sharing and Re-Use**

- Research team uses web-based (cloud) applications to share images and data

Module 7: **Plan for Archiving and Preservation of Data**

- Need for preservation-friendly image and document file formats and media
- Use of model organism repository

View the Case Study Online

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