

# 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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