Integrating Data Management Tools into Research Data Management Instruction

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Repository Citation  
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Course Structure
The University of Massachusetts Medical School curriculum for undergraduate medical education includes a component called the Flexible Clinical Experiences (FCE). FCEs are short, student- or faculty-designed courses that enable participants to explore an area of clinical interest, to be exposed to medical specialties, or to pursue further learning in a specific field. The Lamar Soutter Library designed and offered an FCE on data management principles and best practices in FY 2015-2016.

- **Eligible Students:** Third-year medical students
- **Duration:** 1 week/40 hours of self-contained work
- **Course status:** For-credit evaluation-based elective
- **Pre-requisites:** None

Course Content
The **New England Collaborative Data Management Curriculum** (NECDMC) was tailored to meet the structural program requirements for the FCE. Additional content from other RDM instruction resources was incorporated, including Amanda Whitmire’s **GRAD521 – Research Data Management** course at Oregon State University and Nicole Vasilevsky et al.’s **Gummi Bear Anatomy activity** at Oregon Health & Science University.

- **NECDMC modules 1-6** presented in 4, 3-hour lecture sessions throughout the week
- **Supplemental readings and activities**
- **Guest speakers from UMMS:** IRB and IT Security
- **Gummi Bear Project**

Tools
Data management tools were used to deliver course content and manage projects.

- **LabArchives ELN:** UMMS enterprise license
- **DMPTool:** free online data management plan generator

Outcomes
Participants in FCE3017: Research Data Management Fundamentals were able to successfully apply the basic principles of research data management in the context of a research project, while also utilizing and becoming familiar with available resources.


Conclusions
1. There exists a statistically significant, species-dependent, variation in the average size of gummi bears.
2. This may confer an evolutionary advantage by adding extra deliciousness to Sour bears.
3. There is evidence of color-dependent variations in water absorption amplitude regardless of gummi bear species.