https://pad.carpentries.org/ed-dash-fair-try-2021-05-20

**Being Fair Episode Notebook**

Part of FAIR in (bio) practice, <https://carpentries-incubator.github.io/fair-bio-practice>

Type your name:

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**Exercise 1a, Protocol**

You need to do a western blot of Titin protein, the largest protein in the body with a molecular weight of 3,800 kDa. You found an antibody sold by Sigma Aldrich that has been validated in western blots and immunofluorescence. Sigma Aldrich lists Yu et al 2019 (<https://doi.org/10.1002/acn3.50831)> paper which uses their antibody. **Can you find a complete protocol for a separate and transfer this large protein?**

Hint 1: Methods section has Western blot analysis.

Hint 2: Follow the references

How easy it was?

**Exercise 1a, Data from Figure**

Systems biologists usually require raw numerical data to build their models. However, those are sometimes not easy to find. Take a look at the following example: Try to **find the numerical data** behind the graph shown in **Figure 6** (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC166576/figure/F6/)> which demonstrates changes in levels of phytochrome proteins of Sharrock RA and Clack T, 2002 (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC166576/)>.

Hint 1: Materials and methods describe quantification procedure

Hint 2: Supporting Information or Supplementary Materials sections often contain data files.

How easy it was?

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**Exercise 2. FAIR Example**

Uniprot is high-quality and freely accessible resource of protein sequence and functional information.

Have a look at record for GFP protein: <https://www.uniprot.org/uniprot/P42212>

Identify elements that make it FAIR

Findable:

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Accessible

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Interoperable

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Reusable

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**Exercise 3. FAIR and You**

The FAIR acronym is sometimes accompanied with the following labels:

* Findable  - Citable
* Accessible   - Trackable and countable
* Interoperable  - Intelligible
* Reusable   - Reproducible

Using those labels as hints discuss how FAIR principles directly benefit you as the data creators.

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**Exercise 4. FAIR Quiz**

Which of the following statements is true/false (T or F).

* F in  FAIR stands for free.
* Only  figures presenting results of statistical analysis need underlying numerical     data
* Sharing numerical data as a .pdf in Zenodo is FAIR.
* Sharing numerical data as an Excel file via Github is not FAIR.
* Metadata standards (for example MIAME MIQUE) assure the “IR” in FAIR.
* Group websites are one of the best places to share your data.
* Data from failed experiments are not re-usable.
* Data should always be converted to Excel or .cvs files in order to be FAIR.
* A DOI of a dataset helps in getting credit.
* FAIR data are peer reviewed.
* FAIR data accompany a publication.

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Feedback

1.      How do you feel about the presented topics after this session (type

+1 next to the statement that best describes your feeling):

•       I am more confused:

•       I have a better understanding of them now:

•       My knowledge has not changed much:

2.      Thinking of your knowledge of the lesson topic and its presentation,

which one of the statements best characterize your experience (type +1

next to the statement)

•       I am a novice, and I found the course useful/informative:

•       I am a novice, but I think the course should be improved:

•       I have experience in the presented area, but I found the course

useful/informative:

•       I have experience in the presented area, and I think the course could

be improved:

3.      How was the pace of the lesson:

•       Too fast:

•       About right:

•       Too slow:

4.      If the lesson had to be 5 minutes shorter, what would you remove:

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5. If the lesson could be 5 minutes longer, what would you add or spend

more time on:

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