Being Fair Episode Notebook

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

Type your name and institution:

-

-

-

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 paper](https://doi.org/10.1002/acn3.50831) 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?

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:

-

-

Accessible

-

-

Interoperable

-

-

Reusable

-

-

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.

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.