1. EXPLORE & BE CURIOUS

- With assitance from the ABC Atlas Manual, get familar with the tool and the data
- Play around with various cell properities to filter different dependent variables such as sex, anatomy, cell type
- Note what sparks your curiousity

2. FORMULATE YOUR RESEARCH QUESTION

See below for a few tips on how to formulate a research question using open datasets

- Open data is readily available, allowing you to focus on the feasibility of your question without the costs of running experiments
- Open data still holds unexplored questions— the original researchers have not yet explored all the insights it contains
- The data was curated without a specific question in mind, therefore it is not biased towards a specific brain region and/or experimental condition

How to go from a broad interest to a specific question

- Reflect on your broad interest (e.g., Alzheimer's Disease), then narrow it down to what about that interest intrigues you (e.g., symptoms, stages of disease progression, affected groups)
- Use key phrases from your reflection to search sources like Wikipedia and Google Scholar for more specific terms (e.g., somatostatin neurons prevelant in early stages of Alzheimer's Disease, known Alzheimer's genes and their expression differences, etc.)

Resouces to formulate research questions

University of Washington's "Developing a research question" Guide
https://sites.uw.edu/libid/foundational-research-concepts/developing-a-research-question/

Tennesse State University's "How do I choose a good topic for my research paper? FAQ"
https://tnstate.libanswers.com/faq/292959

3. PICK A DATASET

Once you have a question in mind, we designed a flowchart to help find the dataset best for your question! This flowchart helps you determine which dataset is best for your questions and understand the advantages & disadvantages between datasets.