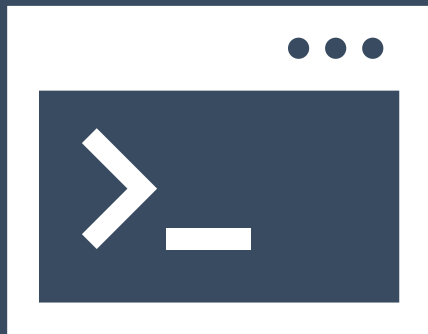


Introduction to differential gene expression (DGE) analysis

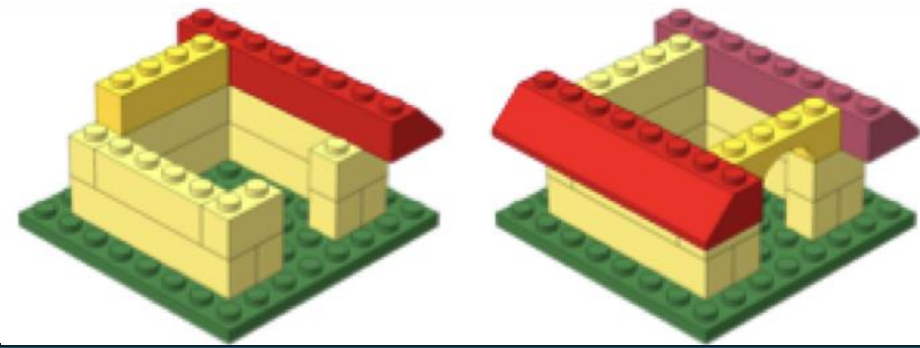
<https://tinyurl.com/hbc-dge-online>



Harvard Chan Bioinformatics Core



Workshop Scope

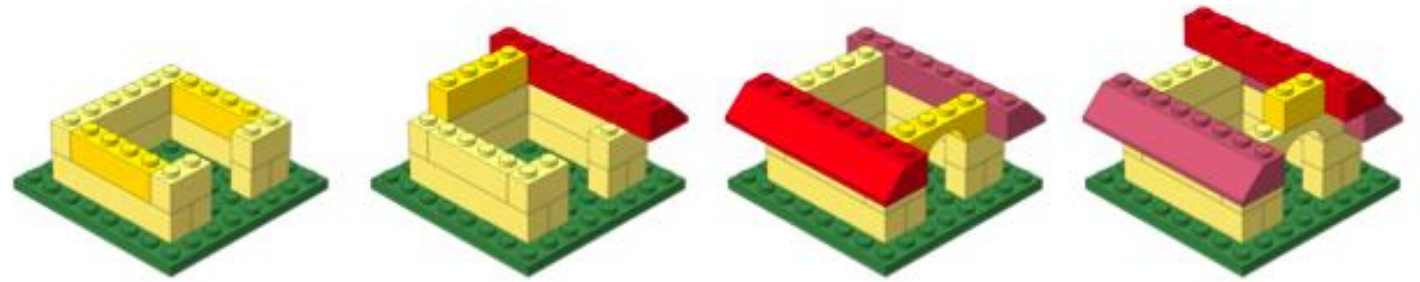


- ❖ Understand the considerations for performing statistical analysis on RNA-seq data
- ❖ Start with gene counts (after alignment and counting)
- ❖ Perform QC on count data
- ❖ Use DESeq2 to perform differential expression analysis on the count data and obtain a list of significantly different genes
- ❖ Visualize results of the analysis
- ❖ Perform functional analysis on the lists of differentially expressed genes

Exit survey

<https://tinyurl.com/DGE-exit-survey>

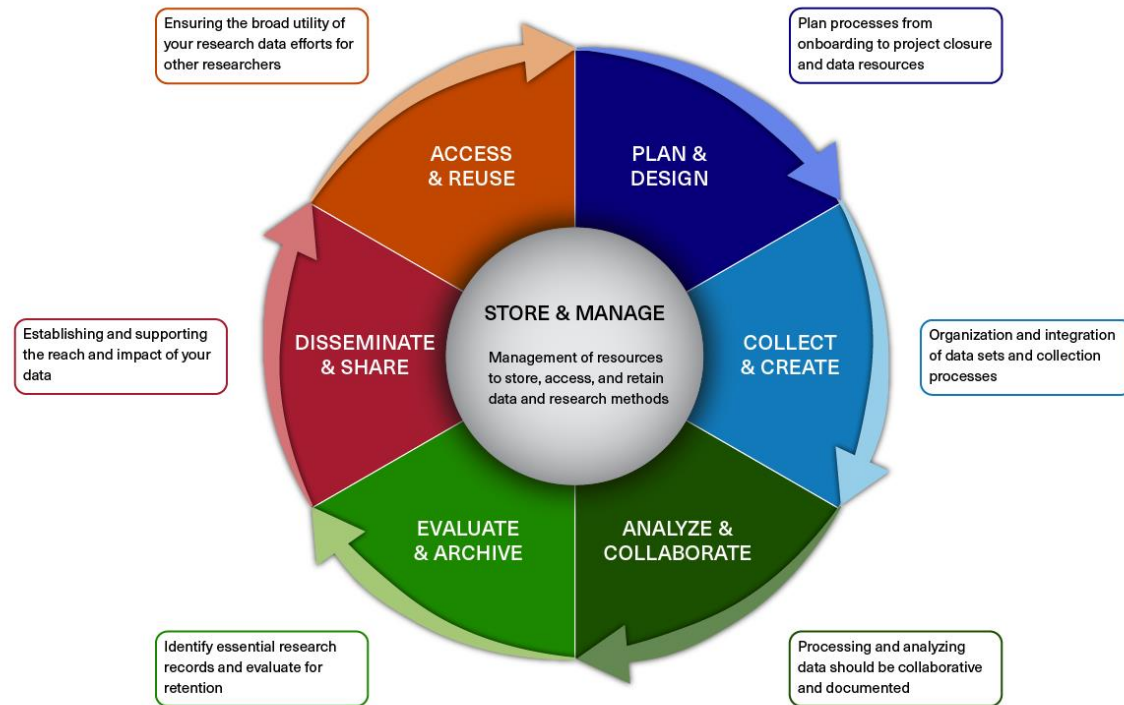
Keep building!



Topic	Pre-requisites	Date/Time	Time	Registration
RShiny	R basics	9/18/24	1 – 4pm	Register!

Research Data Management (RDM)

BIOMEDICAL RESEARCH DATA LIFECYCLE



Better RDM practice benefits you

- ❖ **HMS Data Management LMA**

- ❖ **Webpage:** <https://datamanagement.hms.harvard.edu>

- ❖ **Sign up** for quarterly email updates

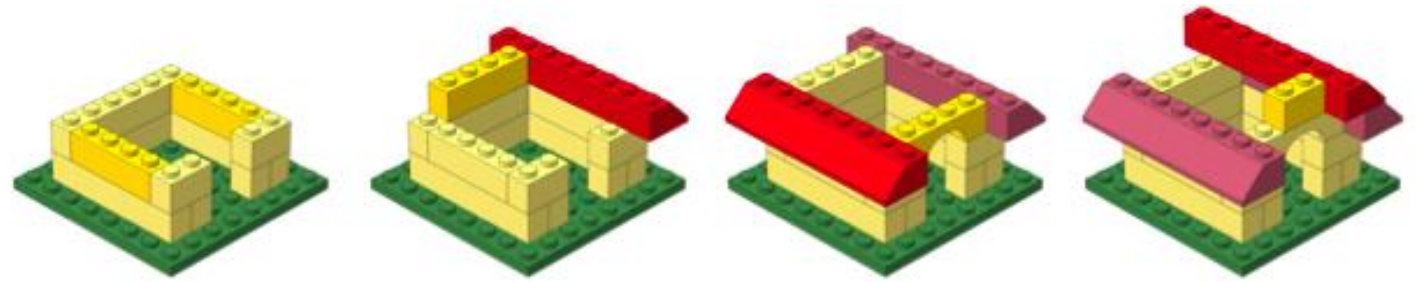
- ❖ **Harvard-wide Research data Management**

- ❖ <https://researchdatamanagement.harvard.edu/>

SEPTEMBER 2024

Date	Time	Event	Location
<input type="checkbox"/> Sep 6	9am	Data Carpentry: Spreadsheets and R	HKS Library, Wexner 434 Ab
<input type="checkbox"/> Sep 13	9am	Data Carpentry: OpenRefine and R	HKS Library, Wexner 434 Ab
<input type="checkbox"/> Sep 24	1pm	Better Research I: Managing Research Data Efficiently	Countway Library Classroom 102 & 103
<input type="checkbox"/> Sep 26	10am	Research Management: Project and Lab Onboarding	Zoom

Keep building!



Topic	Category	Date	Duration	Prerequisites
Shell on High Performance Computing (HPC) for Bioinformatics	Basic	September 3, 6, 10	Three 2.5h sessions	None
Variant Calling	Advanced	September 17, 20, 24	Three 2.5h sessions	Shell and HPC
Introduction to R	Basic	October 8, 11, 15, 18	Four 2h sessions	None
Peak analysis	Advanced	October 25, 29, November 1	Three 2.5h sessions	R
Introduction to SingleCell RNA-seq	Advanced	November 12, 15, 19	Three 2.5h sessions	R
Pseudobulk	Advanced	December 3, 6, 10	Three 2.5h sessions	R

<https://bioinformatics.sph.harvard.edu/upcoming-workshops>

Join us for HBC Community Breakfast!

- ❖ An opportunity to get to know others in the community
- ❖ Free food and beverages
- ❖ Great conversations



**Thursday September 5th, 2024
9:00 to 10:30am**

More Info:

<http://bioinformatics.sph.harvard.edu/breakfast/>

Talk to us early!

Involvement in study design to optimize experiments



More Information

- ❖ *HBC training materials: <https://hbctraining.github.io/main>*
- ❖ *HBC website: <http://bioinformatics.sph.harvard.edu>*

Contact Us

Sign up for our mailing list:

<https://tinyurl.com/hbc-training-mailing-list>

- ❖ *HBC training team:* hbctraining@hsph.harvard.edu
- ❖ *HBC consulting:* bioinformatics@hsph.harvard.edu