Why bother learning R?

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R is a gateway to biostatistics and bioinformatics

- Bioconductor offers a plethora of tools for interacting with almost any kind of data from biotechnology.
- Tidyverse framework provides a structured way to clean and organize data.
- Modeling data and protecting against false conclusions is a strength “out of the box.”

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Separate data from the steps to analyze it.

- You are far likelier to notice a problem in your analysis when you can see it separately.
- We revise our data sets all the time; does your PI ever ask you to analyze a new table the way you did the old one?
- Writing Methods text for manuscripts is easier from a script than from a spreadsheet.

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What else might you use?

- MS Excel is not easier for many things. Have you ever tried doing a box plot or histogram?
- GraphPad Prism costs hundreds of dollars, and it offers a smaller set of tools.
- Python programming is more versatile but may also be more challenging.

https://www.youtube.com/playlist?list=PLJlDdipeN4w6u-Bv3QSdLvmYZm6sASiyn

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Knowing R increases your value.

- You can legitimately claim “data scientist” skills on your résumé.
- Every laboratory and every business needs someone with solid numeracy skills.
- Programming skill teaches us to be methodical about drawing conclusions.

Takeaway messages

- Knowing even a bit of R programming makes you a better scientist.
- If you get “bitten by the bug,” data science offers a well-funded career path.
- Your coworkers may offer you food for your abilities to analyze data.