

PHOTO ESSAY

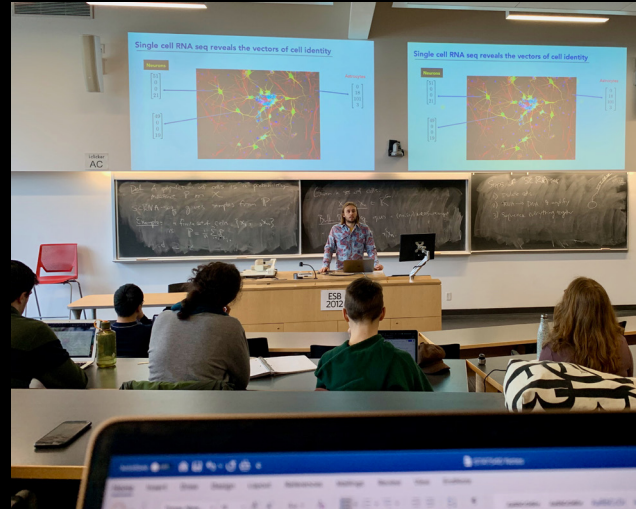
# A WEEK IN THE LIFE OF A GENETICIST





It's the start of the week, and I'll be heading to UBC's main campus to attend my first lecture of the day. It's a beautiful morning, and I'm looking forward to enjoying my 25 minute bus transit.

# MONDAY

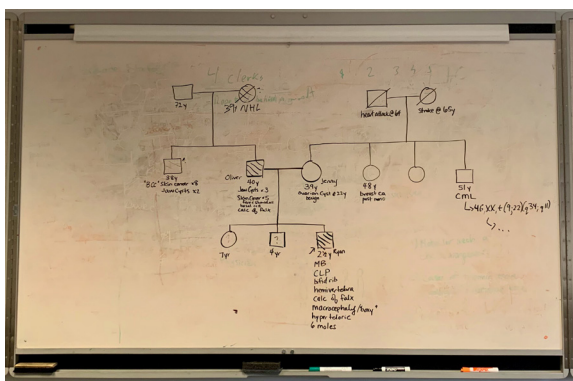


One of the elective classes I decided to take was "Statistical Methods in High Dimensional biology." My PhD project involves a lot of data analysis, and I thoroughly like every lecture of this course. Today, we have a guest lecturer who previously worked at MIT's Broad Institute and is explaining how to track the development of the different cell types that can arise from a single cell.



It's lunch time, and I'm now at the BC Children's Hospital Research Institute, where one of my two labs are based. I'll catch up on my emails now, and complete all of my non-time-consuming tasks.

Almost the end of the day, and I'm in need of a caffeine pick-me-up before heading to a class on the physiology of the mother, fetus, and newborn. Second Cup's flat white coffee keeps me good company through this two hour long, content-heavy lecture.



# TUESDAY

We're on the hereditary cancer section of my human genetics course. Each class is a case-study, and we're given information on a certain individual, and have to determine the genetic cause of their condition. Drawing a pedigree, as shown here, is a common first practice in order to elucidate hereditary disorders.





Class is over, so I've headed to the site of my second lab – the BC Cancer Research Centre. Located on West Broadway, it's in one of the more lively areas of Vancouver.

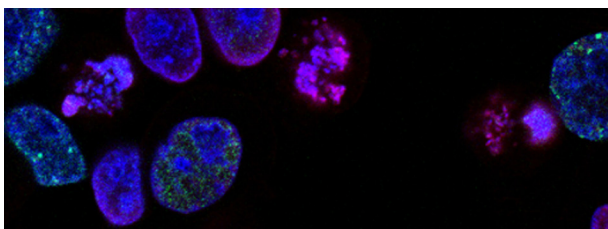


I'm in the process of extracting RNA from placental tissue – a procedure that can take anywhere from an hour and a half to five hours. Since I've just started lab work, I'm borrowing one of the lab benches, but I'll be moving to my own lab bench in a different lab bay soon.

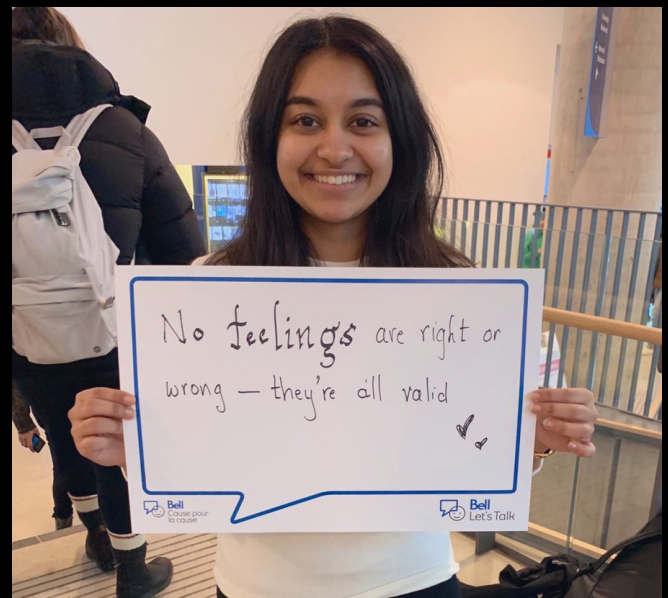
```
....{r, testing different genes in control sample}
#testing all genes of interest
eDat_con %>%
  filter(entrezgene_id %in% ref_genes_1) %>%
  right_join(ids_of_int, by = "entrezgene_id") %>%
  pivot_longer(cols = 2:9, names.to = "sample", values.to = "count") +
  ggplot(aes(x = sample, y = count, fill = hgnc_symbol)) +
```



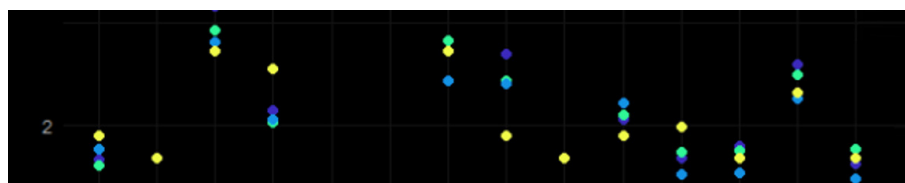
The RNA has been extracted, and I'm heading back home after a long day. I'll take the SkyTrain from Cambie Street, and I purposely walk the longer way to get this breath-taking view of the Downtown skyline and of the mountains.



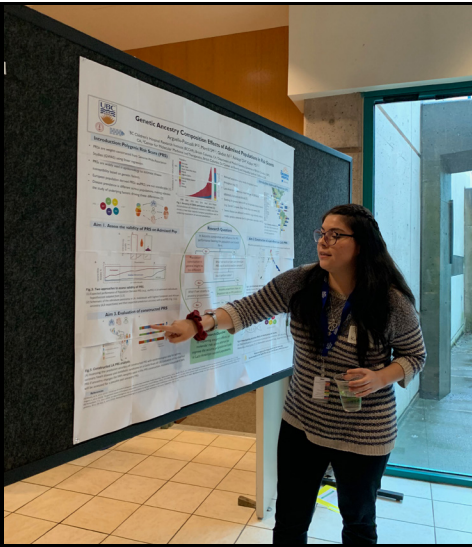
# WEDNESDAY



While on my way to the bus loop at UBC, I walk through The Nest – UBC's Student Union building. Bell, the telecommunications company, was hosting their Let's Talk event to promote discussions around mental health. I decided to share a few thoughts on the topic.





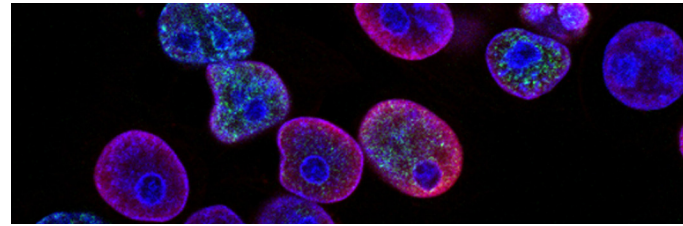


It's Research Day at the research institute! Students display their work through scientific posters, and we have a few presentations and talks. Lunch was provided – which is always a bonus (#studentlife), and a reception with snacks to follow. Here, my friend Paola describes the hypothesis and planning of her research project.

The Vancouver Community College showcases the Fashion Meets Science kids clothing line that was designed with the collaboration of one of the labs in the institute. I absolutely loved the orange dress inspired by the common fruit fly, but the denim skirt depicting an ELISA plate was my favourite.



My human genetics class had an in-person objective: visit a pharmacy that offers genetic tests claimed to be for health concerns. I posed as a clueless, concerned daughter of a father having heart problems, asking the 'expert' at the store about information on the test and it's accuracy. I was, unfortunately and predictably, not impressed.



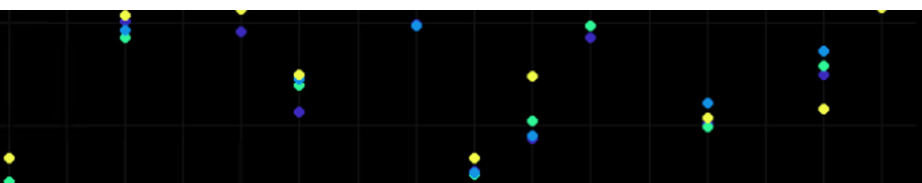
After class at UBC on Thursday morning, I signed up to attend a workshop offered by the Graduate Student Society. This building shown is one of the two larger libraries on campus – the Koerner's Library. If seen from an aerial view, it looks like an open book. The workshop took place inside.

# THURSDAY



The workshop is on the Git software and the online GitHub open-access code sharing website. I conduct all of my analyses in the R Software for Statistical Programming – and GitHub is one of the tools that is heavily used for storing and downloading the specific packages (or plugins) that are required for computation.

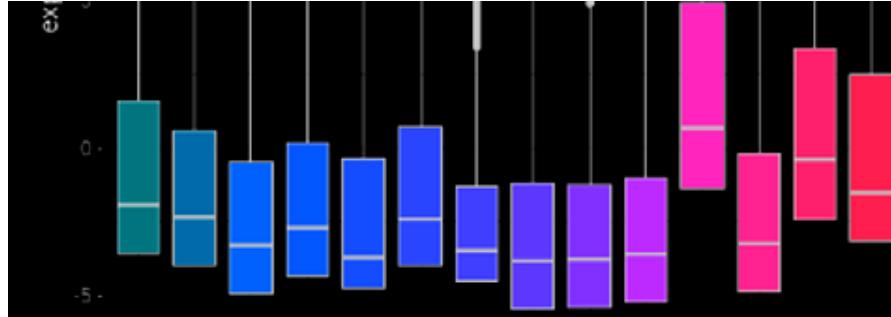
```
26 * ### 1.0 Data
27
28 * #### 1.1 Loading librc
29
30 * ```{r Loading librc
31
32 knitr::opts_chunk(figu
33
34 library(rmarkdown)
35 library(installr)
36 library(knitr)
37 library(kableExtra)
38 library(ggplot2)
39 library(tidyverse)
40 library(lima)
41 library(plomics)
42 library(reshape2)
43 library(dp.lvr)
44 library(tidyrr)
45 library(readxl)
```







I'm back at the research institute to pick up a few samples before heading to the cancer centre. My lab bench here is fairly clean, and our lab – very unsurprisingly – stocks pink gloves (since we're a placenta lab).

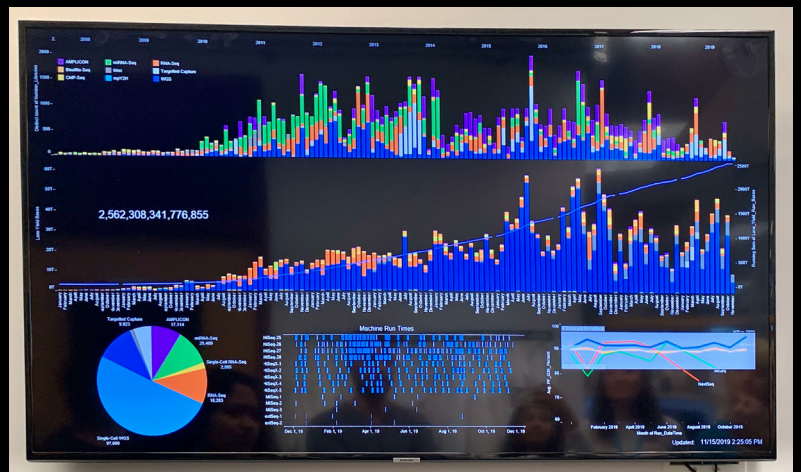


At the cancer centre, this is the view I get to enjoy while I'm waiting for my samples to finish incubating. Words do no justice to the beauty that is Vancouver, or British Columbia.

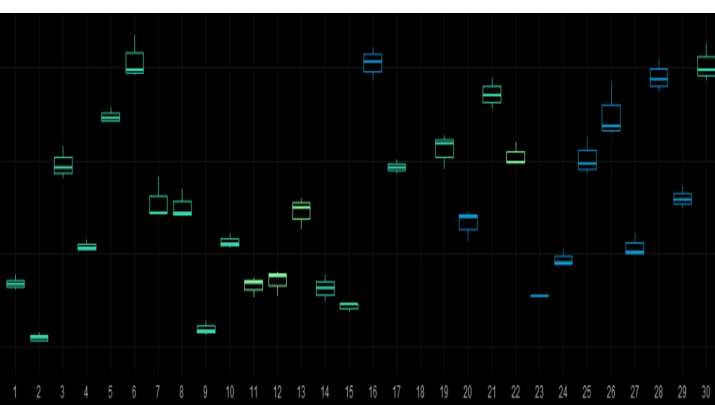
FRIDAY



No classes on Friday, so I take my time waking up and enjoying some tea in the morning. My little plant always cheers me up – a good start to the day.

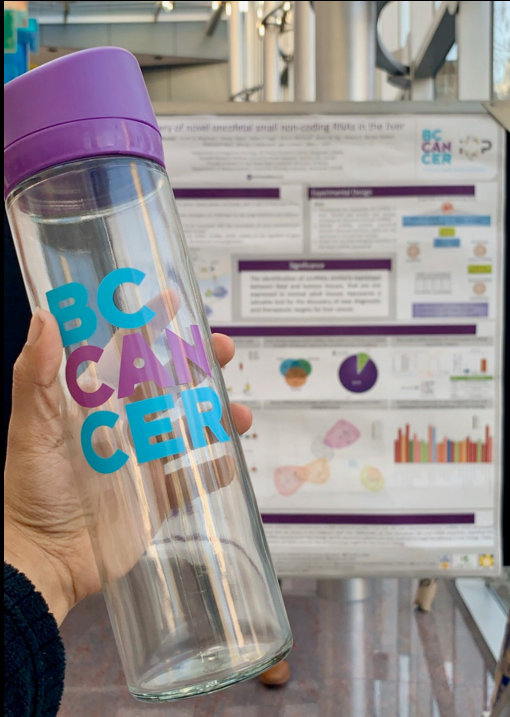
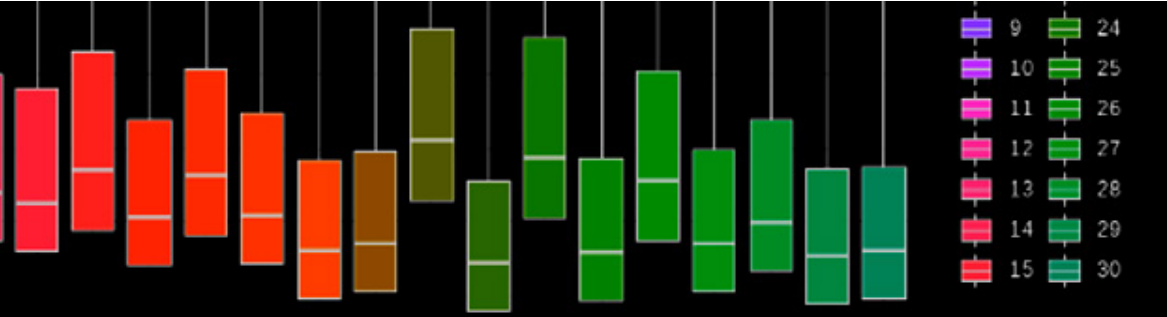


The Genome Sciences Centre is celebrating their anniversary today and has opened their doors to the public. This screen shows the number of genetic bases that have been sequenced at the centre, since its founding. The number is in petabytes!



```
labs(title = "Counts for FG032A", subtitle = "GSC Control Samp
scale_x_discrete(labels=c("m19832" = "Ong", "m19833" = "1ng",
                          "m19836" = "50ng", "m19837" = "100ng
scale_fill_brewer(palette = "Accent", name = "HGNC Symbol") +
theme(plot.title = element_text(family = "Palatino Linotype"),
      plot.subtitle = element_text(family = "Palatino Linotype"),
      legend.text = element_text(family = "Palatino Linotype"))
```





The BC Cancer Summit is also happening today and I have a poster on display. Free goodies are always fun, but the talks at this conference were even better. Networking is crucial in any subject area – and I got the opportunity to meet and listen from some of the top names in the field.



The BC Cancer Summit concluded with a dinner at the Sheraton Wall Centre Hotel. An evening to dress up after the days of talks, my cancer lab and I take small quantities of all of the decadent food served in order to be able to taste the whole spread. The medley of desserts signals the end of my dynamic week – where no week is the same as the last one.

## ABOUT THE PHOTOGRAPHER

Nikita is a first-year Medical Genetics PhD student at the University of British Columbia. When not analysing data, she enjoys reading, photography, expanding her repertoire of cooking recipes and music taste, and drinking Italian Roast coffee. If she could have a superpower it would be telekinesis, and would want to time-travel back to Ancient Greece.

