Southern Ontario Wastewater Analysis Report

Poon Lab

2021-11-29

Analysis of Omicron Mutations

Add some text here about analysis - @Devin do you have thoughts on what should go in here?

Prevalence of Omicron Mutations

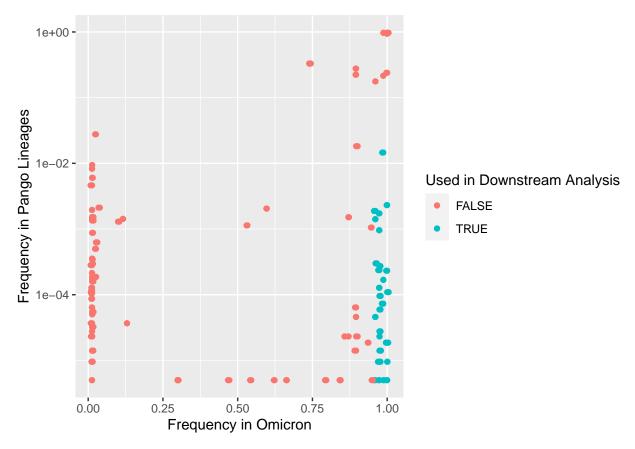


Figure 1 Illustration of 111 mutations found throughout 77 Omnicron genomes. Mutations used in downstream analysis were present in >95% of Omicron genomes and <5% of all other Pango lineages.

From the 111 mutations, we selected mutations present in >95% of Omicron genomes and <5% of all other Pango lineages for further downstream analysis (n=29) on existing data files. These mutations are shown in Table 1.

Table 1 Mutations selected from Omicron mutations for downstream analysis of fastq files.

| Mutation | Frequency in Omicron | Frequency in Pango Lineages |
|----------------------------|----------------------|-----------------------------|
| ~8392A | 1.000000 | 0.0000000 |
| ~18162G | 1.000000 | 0.0000045 |
| ~2831G | 1.000000 | 0.0000136 |
| ~10448A | 1.000000 | 0.0000136 |
| ~13194C | 1.000000 | 0.0001044 |
| ~11536G | 1.000000 | 0.0002270 |
| $\sim 15239 \mathrm{T}$ | 1.000000 | 0.0023066 |
| \sim 5385 G | 0.987013 | 0.0000000 |
| ~23201A | 0.987013 | 0.0000681 |
| \sim 23598G | 0.987013 | 0.0001635 |
| \sim 23524T | 0.987013 | 0.0145930 |
| $\sim 26576 \mathrm{G}$ | 0.974026 | 0.0000000 |
| \sim 22673 T | 0.974026 | 0.0000045 |
| \sim 24468A | 0.974026 | 0.0000045 |
| \sim 27258C | 0.974026 | 0.0000091 |
| \sim 22672C | 0.974026 | 0.0000182 |
| \sim 22678C | 0.974026 | 0.0000227 |
| \sim 22897A | 0.974026 | 0.0000545 |
| \sim 26708A | 0.974026 | 0.0000908 |
| \sim 22577A | 0.974026 | 0.0001226 |
| $\sim \! 27806 \mathrm{T}$ | 0.974026 | 0.0002316 |
| \sim 22881G | 0.974026 | 0.0002679 |
| \sim 26529G | 0.974026 | 0.0009535 |
| \sim 24999T | 0.974026 | 0.0017254 |
| $\sim\!\!24129A$ | 0.961039 | 0.0000000 |
| $\sim\!\!23853\mathrm{A}$ | 0.961039 | 0.0000409 |
| $\sim 23947 \mathrm{T}$ | 0.961039 | 0.0002951 |
| $\sim\!\!26269T$ | 0.961039 | 0.0014075 |
| $\sim\!\!22812T$ | 0.961039 | 0.0018798 |

Omicron Mutations in Wastewater Samples

Omicron Mutation Coverage

Omicron Mutations Discovered