

Brasília, 29 de setembro de 2021

INFORME Nº 36 REDE CORONA-ÔMICA.BR-MCTI

Informe vigilância Genômica - Detecção de Variante de SARS-CoV2 em MG

Um total de 74 amostras (Tabela 1) de SARS-CoV-2 foram submetidas ao sequenciamento genômico através da plataforma Illumina MiSeq no Laboratório de Microbiologia Molecular, Universidade Feevale. As amostras foram coletadas entre o final de julho e início de setembro, e são de pacientes provenientes das cidades de Alvorada (1), Campo Bom (2), Canoas (31), Garibaldi (8), Novo Hamburgo (11), Picada Café (1), Porto Alegre (4), Rio Grande (1), Santa Cruz do Sul (9), São Leopoldo (1), Sapucaia do Sul (2) e Viamão (1) (Rio Grande do Sul); Friburgo (1) (Santa Catarina) e Macapá (1) (Amapá).

Os genomas sequenciados foram primeiramente analisados através da plataforma online *Pangolin* (<https://github.com/hCoV-2019/pangolin>), e caracterizados como pertencentes as linhagens Gamma (P.1, P.1.2 e P.1.9) e Delta (B.1.617.2) (Tabela 1). As frequências correspondentes as linhagens foram de: 75% de Delta (B.1.617.2) e 25% de Gamma (incluindo P.1, P.1.2 e P.1.9). É interessante pontuar que, no sequenciamento anterior, realizado em julho, as frequências das linhagens Gamma e Delta haviam sido basicamente opostas as encontradas no presente momento, sendo 75% caracterizadas como Gamma (20J, V3) e 25% como Delta (21A). Esse acompanhamento epidemiológico permitiu observar a entrada da variante Delta no estado. Os dados temporais completos do sequenciamento de variantes de SARS-CoV-2 em 2021 pelo nosso laboratório podem ser observados na Figura 1.

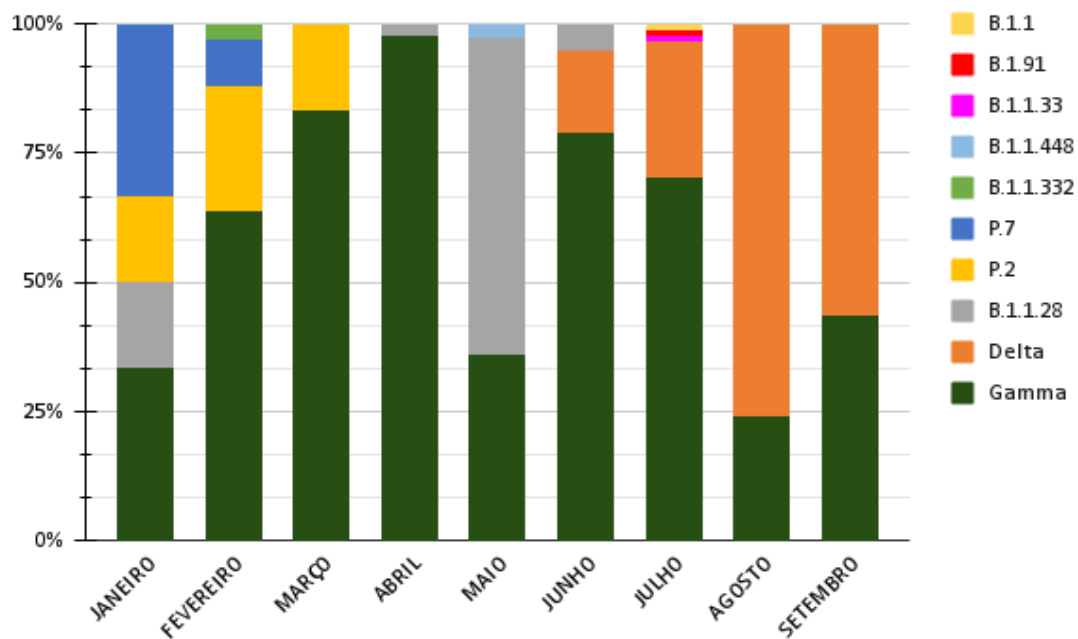


Figura 1. Distribuição das linhagens de SARS-CoV-2 sequenciadas pelo Laboratório de Microbiologia Molecular na Universidade Feevale entre Janeiro e Setembro de 2021.

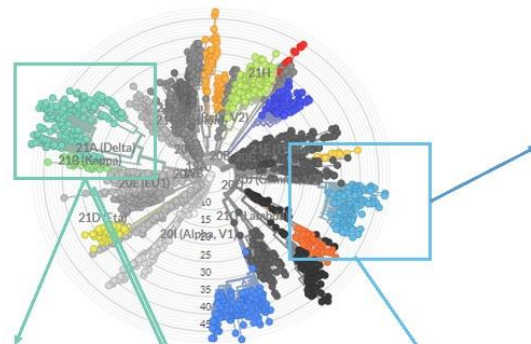
Com o objetivo de confirmar os dados obtidos, as sequências foram alinhadas com genomas completos de SARS-CoV-2 de diferentes variantes através da plataforma online *NextClade* e a árvore filogenética foi inferida (Figura 2) confirmando os dados prévios. O constante acompanhamento de novos genomas, assim como a entrada e distribuição de novas linhagens são de especial relevância, considerando o impacto causado por linhagens como B.1.1.7 (Alpha), B.1.351 (Beta), P.1, e B.1.617.2 (Delta), no Reino Unido, África do Sul, Brasil e Índia, respectivamente. Todos os dados estão sendo disponibilizados em bases de dados públicos nacionais (Corona-Ômica.BR – MCTI) e internacionais (GISAID) com a posterior submissão do trabalho ao periódico científico.

Gamma



Delta

ID LMM	Linagem
hCoV-19/Brazil/RS-LMM63594/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63593/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM62755/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM62523/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM62955/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63588/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM62657/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63595/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63586/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM62604/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63587/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM62447/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63591/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM62769/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM62763/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM62541/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63592/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM62941/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63584/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM62759/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM62527/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM62509/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM62593/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM62516/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63585/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63590/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM62519/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM62542/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63589/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM62933/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM62770/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM62962/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM62924/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM62946/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63848/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63837/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63836/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63835/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63829/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63828/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63826/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63823/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63651/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63598/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63451/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63157/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63156/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63146/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63125/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63103/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63101/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63083/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63081/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63047/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63045/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM62983/2021	B.1.617.2



ID LMM	Linagem
hCoV-19/Brazil/RS-LMM62470/2021	P.1
hCoV-19/Brazil/RS-LMM62932/2021	P.1.2
hCoV-19/Brazil/RS-LMM62499/2021	P.1
hCoV-19/Brazil/RS-LMM62733/2021	P.1
hCoV-19/Brazil/RS-LMM62950/2021	P.1
hCoV-19/Brazil/RS-LMM62960/2021	P.1
hCoV-19/Brazil/RS-LMM62471/2021	P.1.2
hCoV-19/Brazil/RS-LMM62486/2021	P.1
hCoV-19/Brazil/RS-LMM63831/2021	P.1.2
hCoV-19/Brazil/RS-LMM63689/2021	P.1
hCoV-19/Brazil/RS-LMM63686/2021	P.1
hCoV-19/Brazil/RS-LMM63680/2021	P.1
hCoV-19/Brazil/RS-LMM63677/2021	P.1
hCoV-19/Brazil/RS-LMM63675/2021	P.1.9
hCoV-19/Brazil/RS-LMM63674/2021	P.1
hCoV-19/Brazil/RS-LMM63667/2021	P.1.9
hCoV-19/Brazil/RS-LMM63084/2021	P.1
hCoV-19/Brazil/RS-LMM62964/2021	P.1

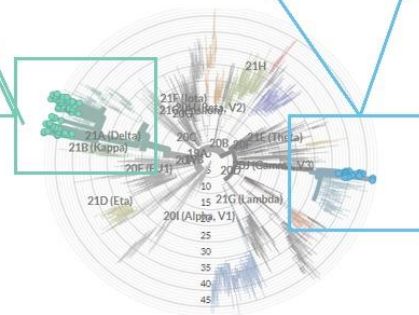


Figura 2. Árvore filogenética realizada através da plataforma online NextClade.

Tabela 1. Identificação das amostras e caracterização das linhagens conforme plataforma online Pangolin.

ID LMM	Linhagem
hCoV-19/Brazil/RS-LMM63594/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63593/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM62755/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM62523/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM62955/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63588/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM62657/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63595/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63586/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM62604/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63587/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM62470/2021	P.1
hCoV-19/Brazil/RS-LMM62447/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM62932/2021	P.1.2
hCoV-19/Brazil/RS-LMM63591/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM62769/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM62763/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM62541/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63592/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM62941/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63584/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM62759/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM62527/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM62509/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM62499/2021	P.1
hCoV-19/Brazil/RS-LMM62733/2021	P.1
hCoV-19/Brazil/RS-LMM62593/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM62516/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63585/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63590/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM62519/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM62542/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63589/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM62950/2021	P.1
hCoV-19/Brazil/RS-LMM62960/2021	P.1
hCoV-19/Brazil/RS-LMM62933/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM62770/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM62962/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM62471/2021	P.1.2
hCoV-19/Brazil/RS-LMM62486/2021	P.1

hCoV-19/Brazil/RS-LMM62924/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM62946/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63838/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63837/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63836/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63835/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63831/2021	P.1.2
hCoV-19/Brazil/RS-LMM63829/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63828/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63826/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63823/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63689/2021	P.1
hCoV-19/Brazil/RS-LMM63686/2021	P.1
hCoV-19/Brazil/RS-LMM63680/2021	P.1
hCoV-19/Brazil/RS-LMM63677/2021	P.1
hCoV-19/Brazil/RS-LMM63675/2021	P.1.9
hCoV-19/Brazil/RS-LMM63674/2021	P.1
hCoV-19/Brazil/RS-LMM63667/2021	P.1.9
hCoV-19/Brazil/RS-LMM63651/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63598/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63451/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63157/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63156/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63146/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63125/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63103/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63101/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63084/2021	P.1
hCoV-19/Brazil/RS-LMM63083/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63081/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63047/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM63045/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM62983/2021	B.1.617.2
hCoV-19/Brazil/RS-LMM62964/2021	P.1