Detection of high level of co-infection and the emergence of novel SARS-CoV-2 delta-omicron and omicron-omicron recombinants in the epidemiological surveillance of Andalusia

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Table S1. Sequences used in this study

Sample	Event (C=Coinfection, R=Recombinant)	Collection date	Localization (Hospital and Province)	ENA Sample ID
AND17788	C	2022-01-12	Hospital Universitario San Cecilio (Granada)	SAMEA110395582
AND17799	C	2022-01-12	Hospital Universitario San Cecilio (Granada)	SAMEA110395583
AND19065	C	2022-01-17	Hospital Universitario Virgen de la Victoria (Málaga)	SAMEA110395584
AND19148	C	2022-01-22	Hospital Universitario Virgen de la Victoria (Málaga)	SAMEA110395585
AND19238	C	2022-01-28	Hospital Universitario San Cecilio (Granada)	SAMEA110395586
AND19468	C	2022-01-30	Hospital Universitario San Cecilio (Granada)	SAMEA110395587
AND19571	C	2022-02-02	Hospital Costa del Sol (Marbella, Málaga)	SAMEA110395588
AND20157	C	2022-02-04	Hospital Universitario Puerta del Mar (Cádiz)	SAMEA110395589
AND20304	C	2022-02-18	Hospital Universitario Puerta del Mar (Cádiz)	SAMEA110395590
AND20601	C	2022-02-15	Hospital Universitario de Jaén (Jaén)	SAMEA110395591
AND20905	C	2022-03-01	Hospital Universitario San Cecilio (Granada)	SAMEA110395592

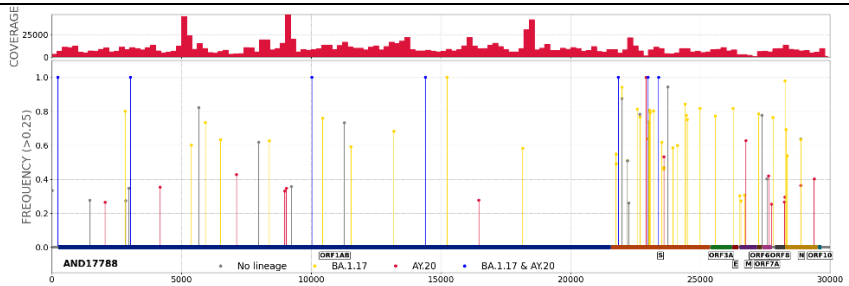
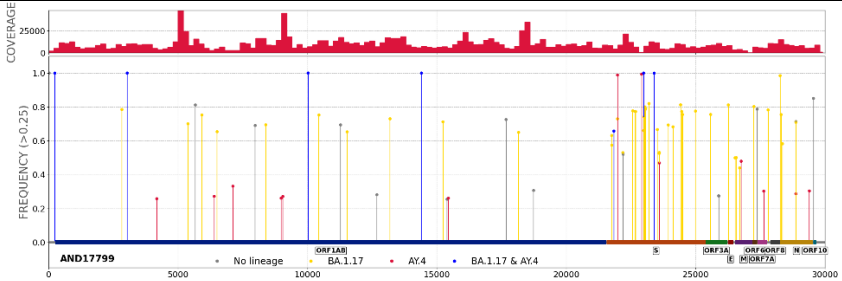
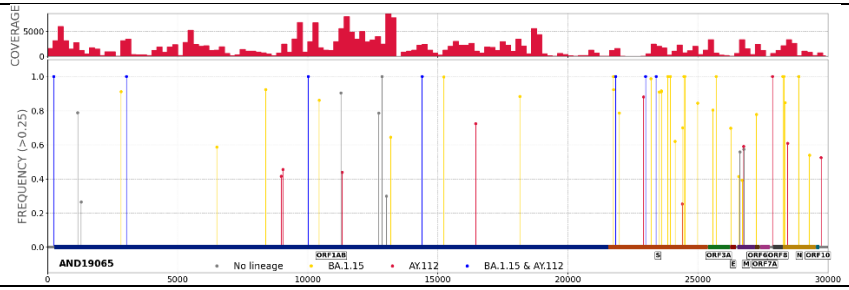
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AND20966	C	2022-02-18	Hospital Virgen de la Victoria (Málaga)	SAMEA110395594
AND21001	C	2022-02-15	Hospital Universitario Virgen de la Victoria (Málaga)	SAMEA110395595
AND21137	C	2022-02-25	Hospital de Antequera (Málaga)	SAMEA110395596
AND21237*	R	2022-03-02	Hospital Universitario Reina Sofía (Córdoba)	SAMEA110395597
AND21266	R	2022-03-09	Hospital Universitario Virgen del Rocío (Sevilla)	SAMEA110395598
AND21375	C	2022-03-01	Hospital Universitario Puerta del Mar (Cádiz)	SAMEA110395599
AND21391	C	2022-03-08	Hospital Universitario San Cecilio (Granada)	SAMEA110395600
AND21405	C	2022-03-09	Hospital Virgen de las Nieves (Granada)	SAMEA110395601
AND21422	C	2022-03-04	Plataforma Provincial de Almería (Almería)	SAMEA110395602
AND21474	C	2022-03-01	Hospital Universitario de Jaén (Jaén)	SAMEA110395603
AND21475	C	2022-02-28	Hospital Universitario Virgen de la Victoria (Málaga)	SAMEA110395604
AND21483	C	2022-02-22	Hospital Universitario Virgen de la Victoria (Málaga)	SAMEA110395605
AND21520	C	2022-02-07	Hospital Universitario de Jaén (Jaén)	SAMEA110395606
AND21532	R	2022-03-07	Hospital Universitario San Cecilio (Granada)	SAMEA110395607
AND21550	C	2022-03-07	Hospital Universitario San Cecilio (Granada)	SAMEA110395608
AND21552	C	2022-03-07	Hospital Universitario San Cecilio (Granada)	SAMEA110395609
AND21554	C	2022-03-07	Hospital Universitario San Cecilio (Granada)	SAMEA110395610
AND21702	C	2022-02-04	Hospital Universitario Puerta del Mar (Cádiz)	SAMEA110395611
AND21845	C	2022-03-14	Plataforma Provincial de Almería (Almería)	SAMEA110395612
AND21903	C	2022-02-28	Hospital Universitario de Jaén (Jaén)	SAMEA110395613
AND21907	C	2022-03-08	Hospital Huércal-Overa (Almería)	SAMEA110395614
AND21955	C	2022-03-03	Hospital Universitario Virgen de la Victoria (Málaga)	SAMEA110395615
AND21956	C	2022-03-03	Hospital Universitario Virgen de la Victoria (Málaga)	SAMEA110395616
AND22019	C	2022-03-10	Hospital Universitario de Jaén (Jaén)	SAMEA110395617
AND22023	C	2022-03-09	Hospital Universitario de Jaén (Jaén)	SAMEA110395618
AND22043	R	2022-03-18	Hospital Universitario Virgen del Rocío (Sevilla)	SAMEA110395619
AND22078	C	2022-03-23	Hospital Universitario Virgen del Rocío (Sevilla)	SAMEA110395620

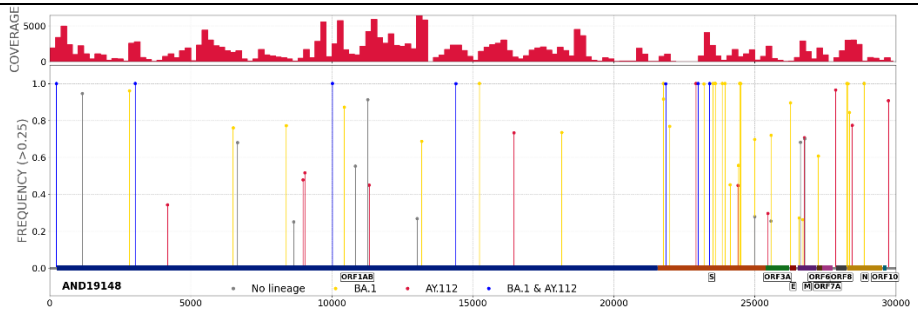
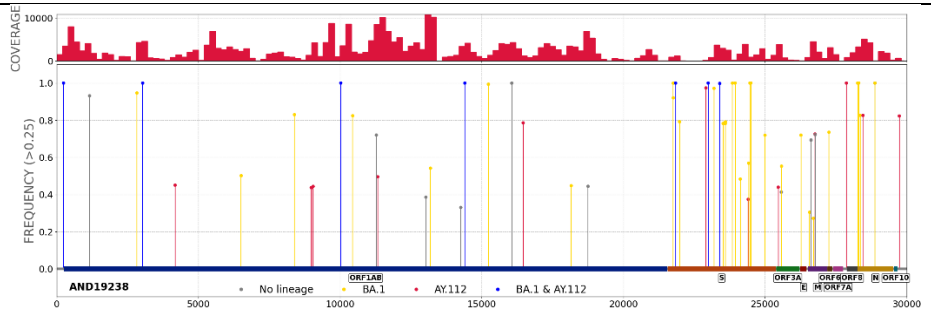
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AND22431	C	2022-03-28	Hospital Universitario San Cecilio (Granada)	SAMEA110395623
AND22527	C	2022-03-14	Hospital Universitario Virgen de la Victoria (Málaga)	SAMEA110395624
AND22544	C	2022-03-17	Hospital Universitario Virgen de la Victoria (Málaga)	SAMEA110395625
AND22788	C	2022-04-07	Hospital Universitario San Cecilio (Granada)	SAMEA110395626
AND22794	C	2022-03-31	Hospital Universitario San Cecilio (Granada)	SAMEA110395627
AND22816	C	2022-03-31	Plataforma Provincial de Almería (Almería)	SAMEA110395628
AND22894	C	2022-03-21	Hospital Universitario Virgen de la Victoria (Málaga)	SAMEA110395629
AND22925	C	2022-03-21	Hospital Universitario Virgen de la Victoria (Málaga)	SAMEA110395630
AND22927	C	2022-03-28	Hospital Universitario Virgen de la Victoria (Málaga)	SAMEA110395631
AND22930	C	2022-04-05	Hospital Universitario Virgen de la Victoria (Málaga)	SAMEA110395632
AND23055*	R	2022-03-02	Hospital Universitario Reina Sofía (Córdoba)	SAMEA110395673
AND23187*	R	2022-02-18	Hospital Universitario Reina Sofía (Córdoba)	SAMEA110395633
AND23287	R	2022-04-18	Hospital Universitario Juan Ramón Jiménez (Huelva)	SAMEA110395634
AND23305	R	2022-04-20	Hospital Universitario Virgen del Rocío (Sevilla)	SAMEA110395635
AND23397	C	2022-04-25	Hospital Universitario San Cecilio (Granada)	SAMEA110395636
AND23422	C	2022-04-25	Hospital Universitario San Cecilio (Granada)	SAMEA110395637
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AND23569	C	2022-04-12	Hospital Universitario Poniente (El Ejido, Almería)	SAMEA110395643
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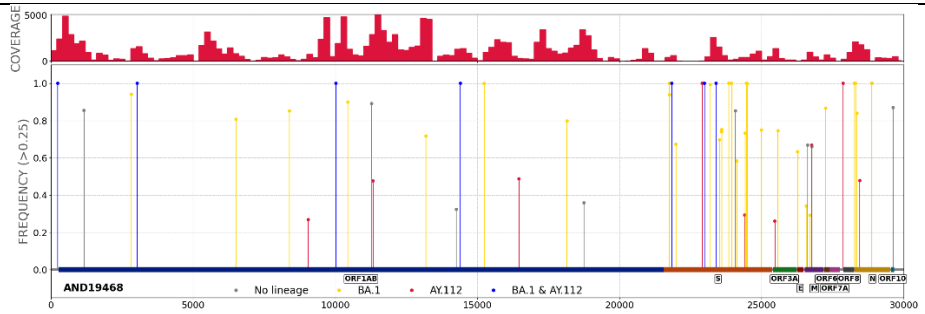
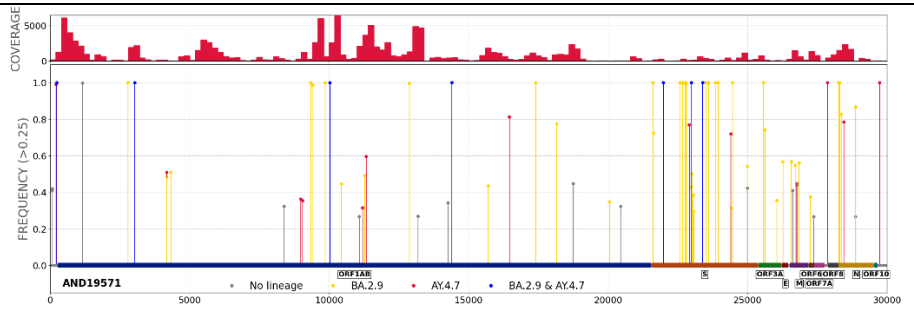
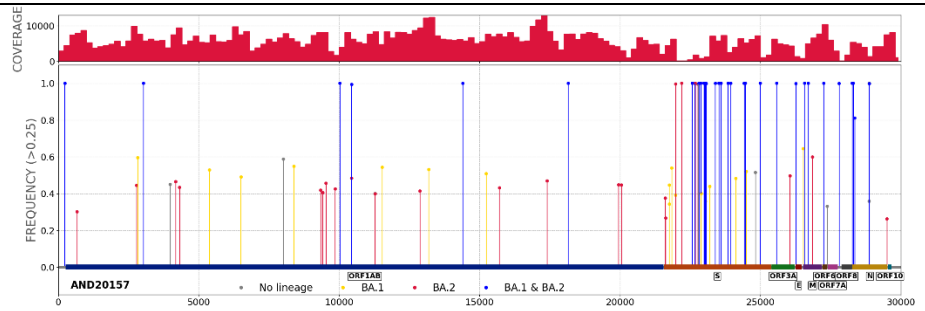
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AND23732	R	2022-04-20	Hospital Universitario Juan Ramón Jiménez (Huelva)	SAMEA110395649
AND23734	R	2022-04-21	Hospital Universitario Juan Ramón Jiménez (Huelva)	SAMEA110395650
AND23786	R	2022-04-19	Hospital Universitario Juan Ramón Jiménez (Huelva)	SAMEA110395651
AND23787	R	2022-04-19	Hospital Universitario Juan Ramón Jiménez (Huelva)	SAMEA110395652
AND23791	R	2022-04-25	Hospital Universitario Juan Ramón Jiménez (Huelva)	SAMEA110395653
AND23912	C	2022-04-22	Hospital Universitario de Jaén (Jaén)	SAMEA110395654
AND24108	C	2022-04-26	Hospital Universitario Virgen de la Victoria (Málaga)	SAMEA110395655
AND24298	R	2022-05-07	Hospital Universitario Juan Ramón Jiménez (Huelva)	SAMEA110395656
AND24301	R	2022-04-27	Hospital Universitario Juan Ramón Jiménez (Huelva)	SAMEA110395657
AND24302	R	2022-04-27	Hospital Universitario Juan Ramón Jiménez (Huelva)	SAMEA110395658
AND24350	R	2022-05-12	Hospital Universitario Virgen del Rocío (Sevilla)	SAMEA110395659
AND24357	R	2022-05-12	Hospital Universitario Virgen del Rocío (Sevilla)	SAMEA110395660
AND24465	C	2022-05-10	Hospital Universitario San Cecilio (Granada)	SAMEA110395661
AND24480	C	2022-05-11	Hospital Universitario San Cecilio (Granada)	SAMEA110395662
AND24658	R	2022-05-10	Hospital Universitario de Jaén (Jaén)	SAMEA110395663
AND24834	R	2022-05-16	Hospital Universitario Juan Ramón Jiménez (Huelva)	SAMEA110395664
AND24843	R	2022-05-16	Hospital Universitario Juan Ramón Jiménez (Huelva)	SAMEA110395665
AND24864	R	2022-05-09	Hospital Universitario Juan Ramón Jiménez (Huelva)	SAMEA110395666
AND24884	R	2022-05-18	Hospital Universitario Juan Ramón Jiménez (Huelva)	SAMEA110395667
AND25120	C	2022-05-17	Hospital Universitario San Cecilio (Granada)	SAMEA110395668
AND25238	C	2022-05-16	Hospital Universitario de Jaén (Jaén)	SAMEA110395669
AND25239	C	2022-05-21	Hospital Universitario de Jaén (Jaén)	SAMEA110395670
AND25258	R	2022-05-10	Hospital Universitario Virgen de la Victoria (Málaga)	SAMEA110395671
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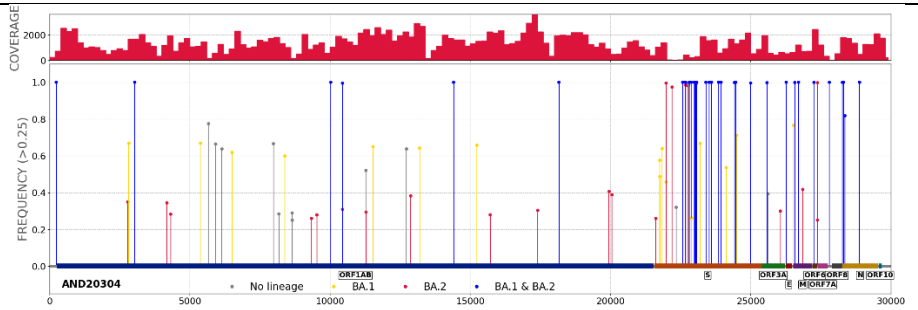
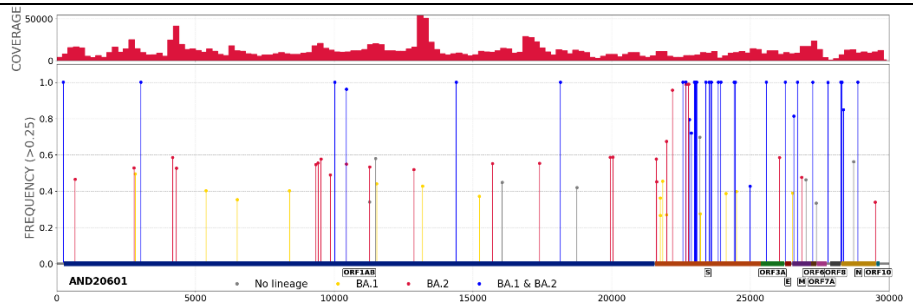
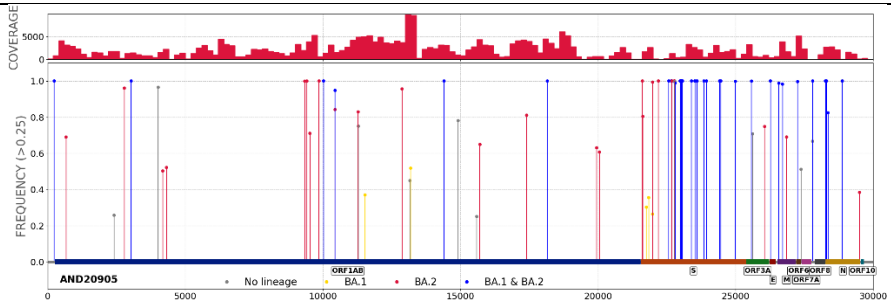
* Samples correspond to the same patient

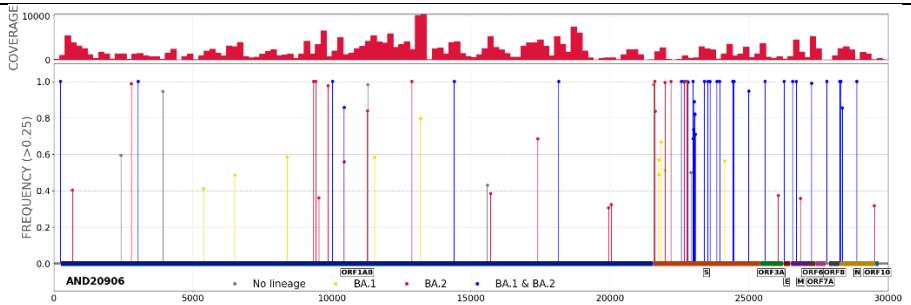
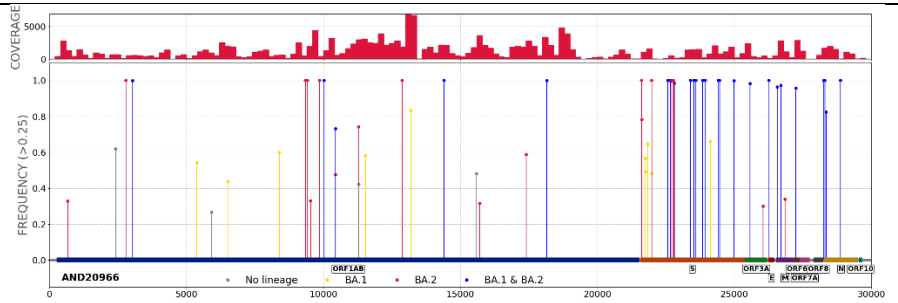
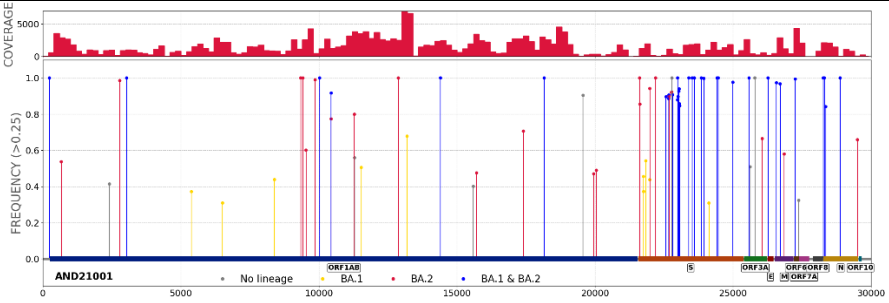
Table S2. SARS-CoV-2 sequences compatible with co-infections

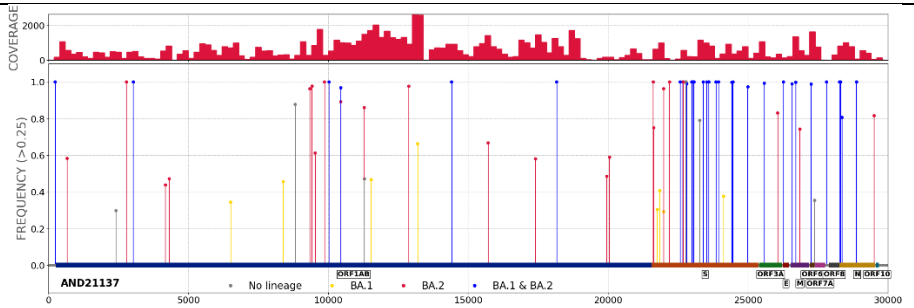
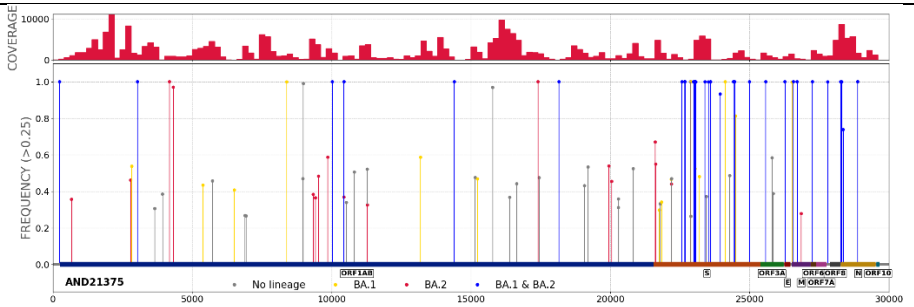
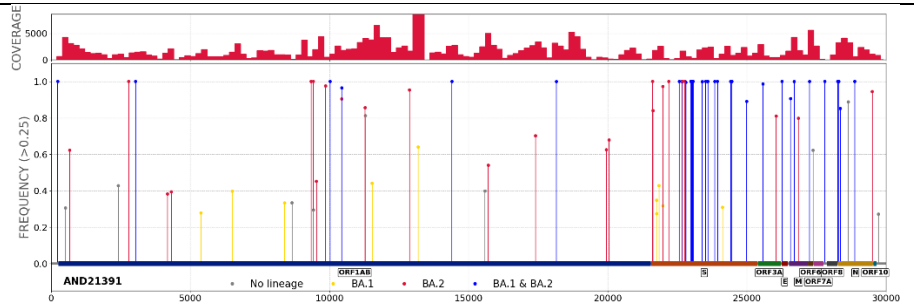
Sample	Clade / nextclade pango (Nextclade)	Lineage (Pangolin)	#Breakpoints (sc2rf)	Lollipop plot
AND17788	21K / BA.1	Unassigned	8	 Delta – Omicron coinfection
AND17799	21K / BA.1.17	Unassigned	8	 Delta – Omicron coinfection
AND19065	20B / B.1.1	Unassigned	4	

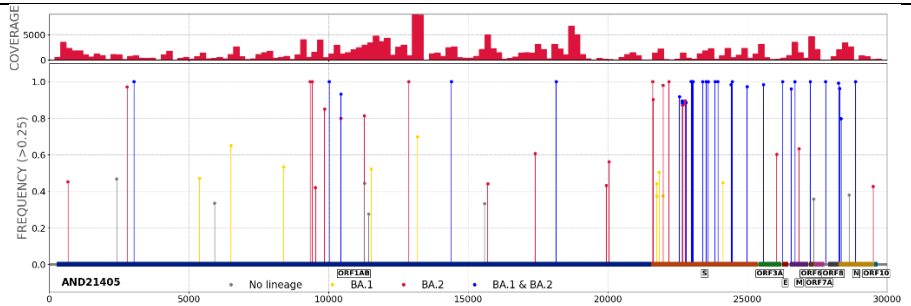
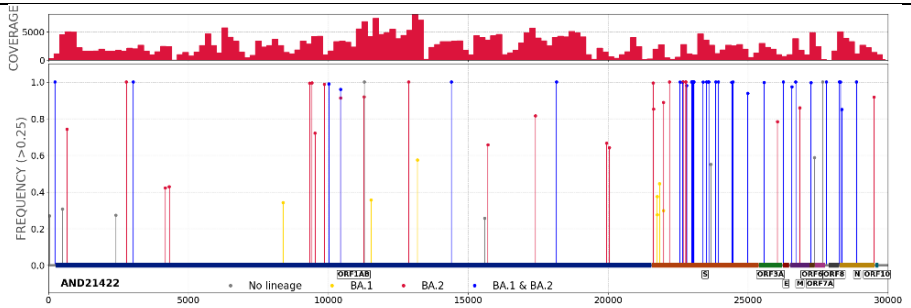
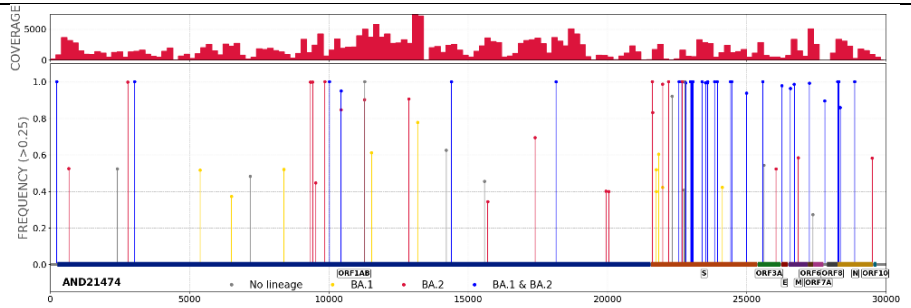
				Delta – Omicron coinfection
AND19148	20B / B.1.1	Unassigned	18	 Delta-Omicron coinfection
AND19238	20B / B.1.1	Unassigned	16	 Delta-Omicron coinfection

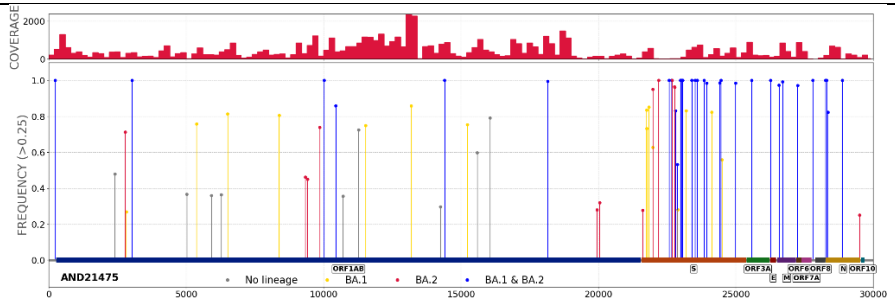
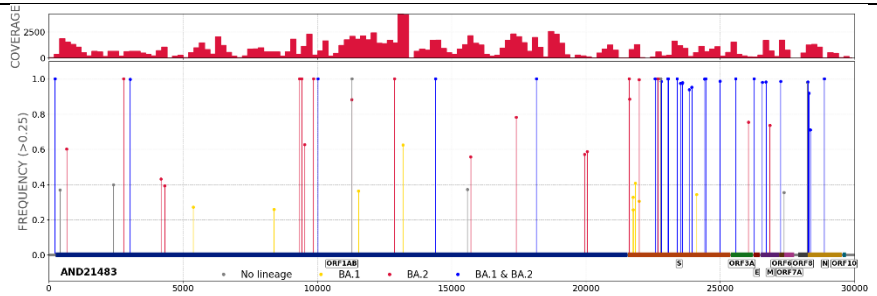
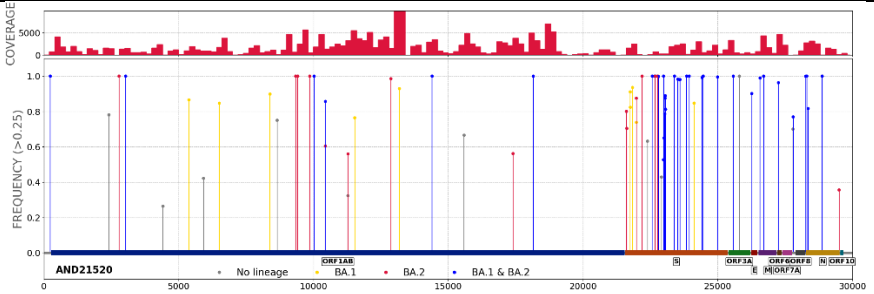
AND19468	20B / B.1.1	Unassigned	12	 Delta-Omicron coinfection
AND19571	20B / B.1.1	Unassigned	20	 Delta-Omicron coinfection
AND20157	B.1.1.529	Unassigned	-	 Omicron BA.1 – Omicron BA.2 coinfection

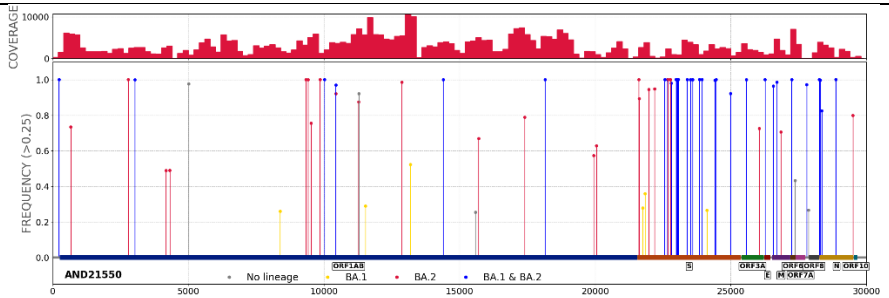
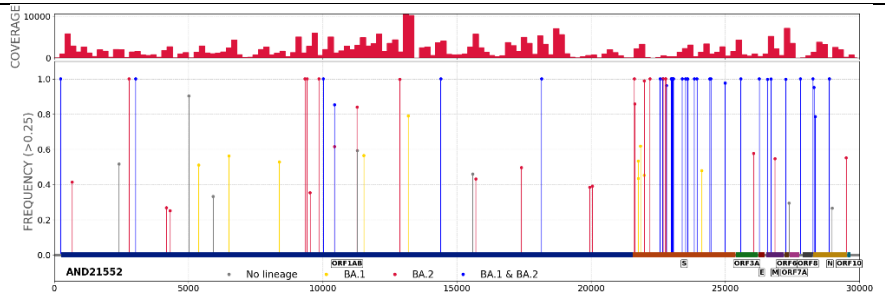
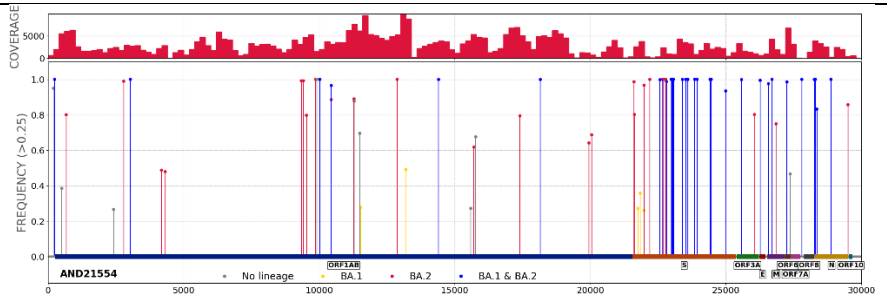
AND20304	21M / B.1.1.529	Unassigned	4	 Omicron BA.1 – Omicron BA.2 coinfection
AND20601	21M / B.1.1.529	Unassigned	-	 Omicron BA.1 – Omicron BA.2 coinfection
AND20905	recombinant / XT (BA.1-BA.2)	Unassigned	-	 Omicron BA.1 – Omicron BA.2 coinfection

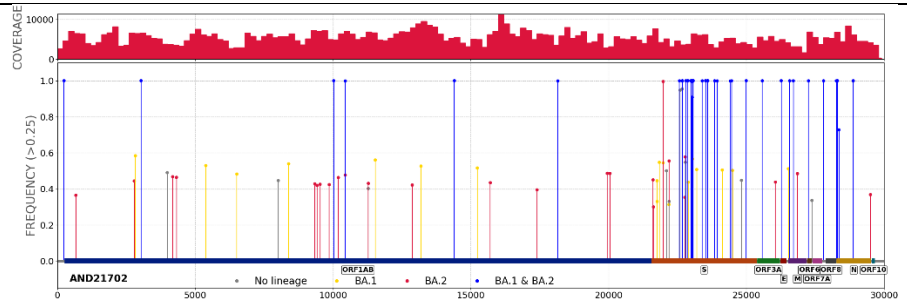
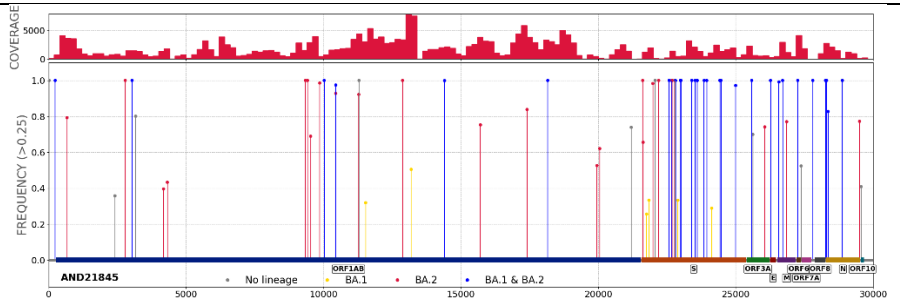
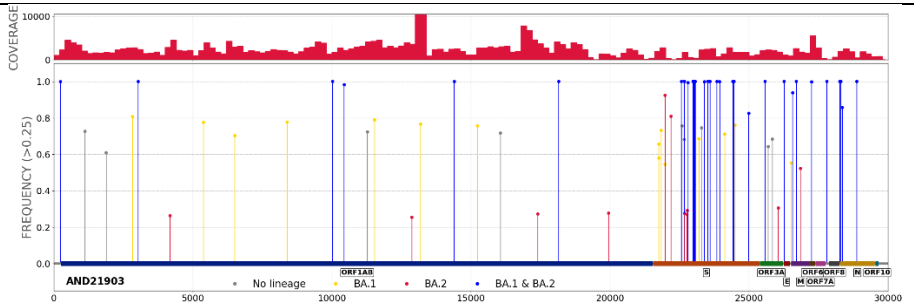
AND20906	recombinant / XT (BA.1-BA.2)	Unassigned	9	 Omicron BA.1 – Omicron BA.2 coinfection
AND20966	recombinant / XT (BA.1-BA.2)	Unassigned	9	 Omicron BA.1 – Omicron BA.2 coinfection
AND21001	recombinant / XT (BA.1-BA.2)	Unassigned	-	 Omicron BA.1 – Omicron BA.2 coinfection

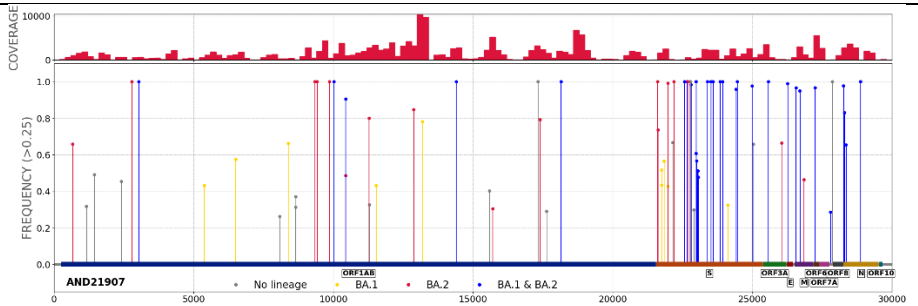
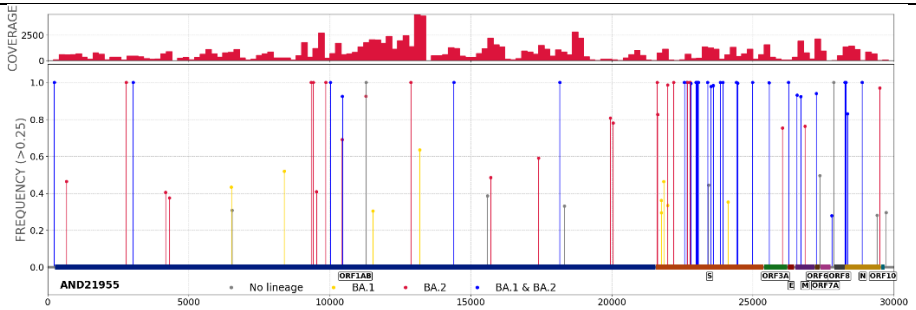
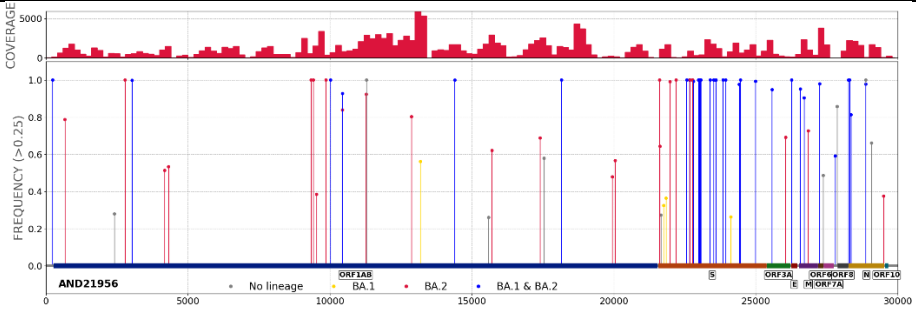
AND21137	21L / BA.2.23	Unassigned	-	 Omicron BA.1 – Omicron BA.2 coinfection
AND21375	21M/ B.1.1.529	Unassigned	1	 Omicron BA.1 – Omicron BA.2 coinfection
AND21391	21L / BA.2.23	Unassigned	-	 Omicron BA.1 – Omicron BA.2 coinfection

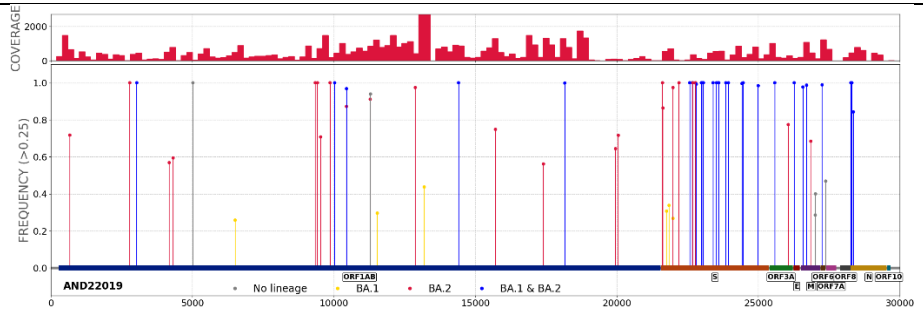
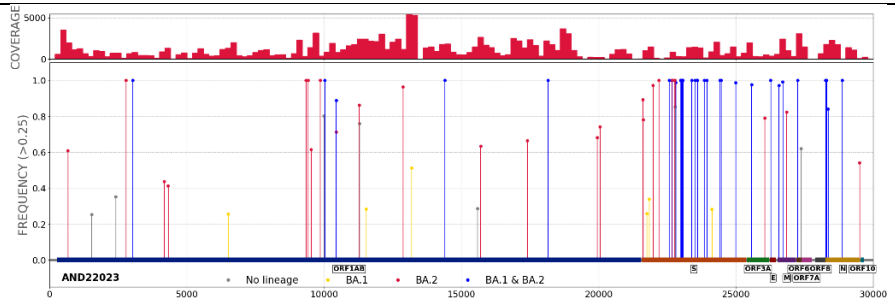
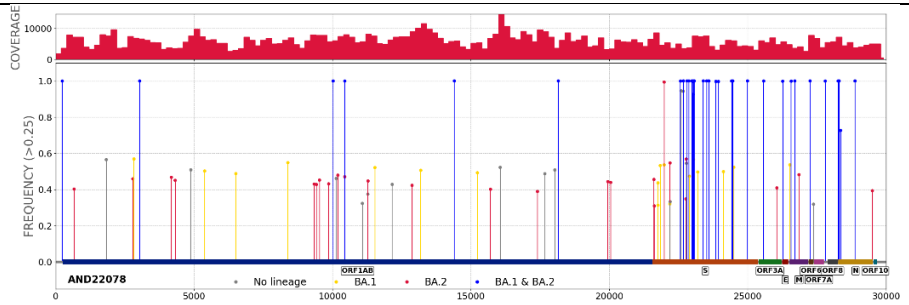
AND21405	recombinant / XT (BA.1-BA.2)	Unassigned	-	 Omicron BA.1 – Omicron BA.2 coinfection
AND21422	21L / BA.2.23	Unassigned	-	 Omicron BA.1 – Omicron BA.2 coinfection
AND21474	recombinant / XT (BA.1-BA.2)	Unassigned	7	 Omicron BA.1 – Omicron BA.2 coinfection

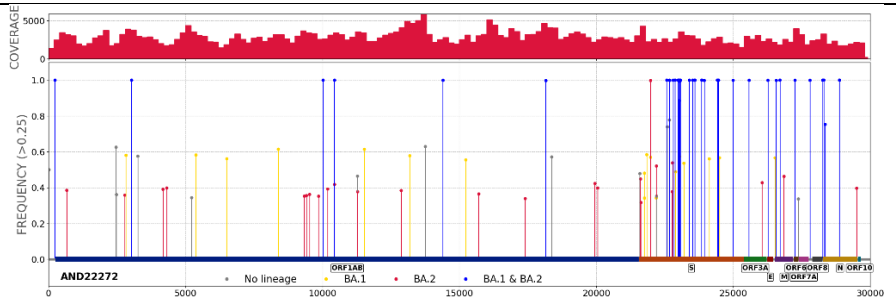
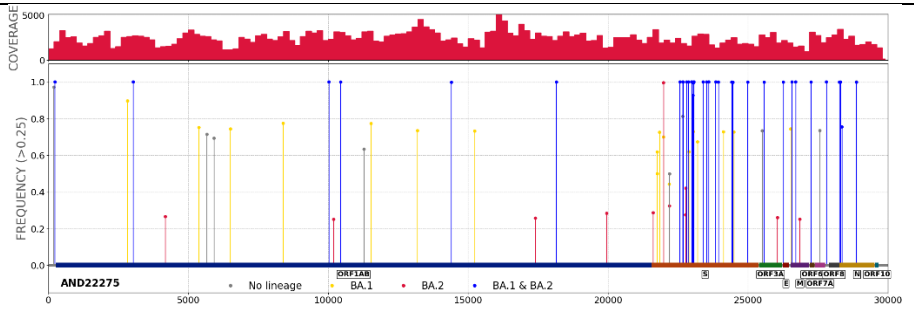
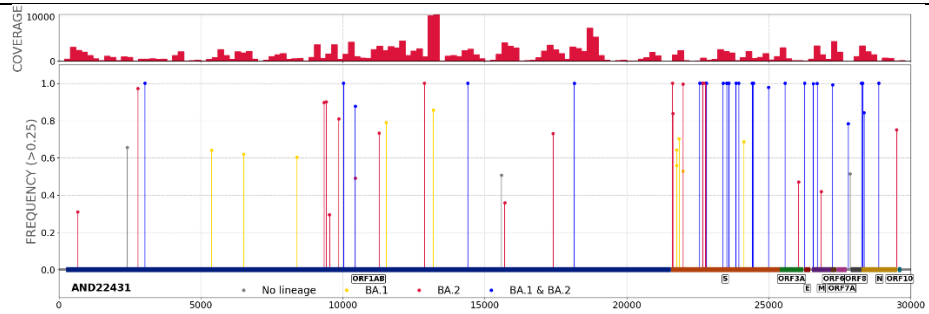
AND21475	21K / BA.1	Unassigned	2	 Omicron BA.1 – Omicron BA.2 coinfection
AND21483	recombinant / XT (BA.1-BA.2)	Unassigned	18	 Omicron BA.1 – Omicron BA.2 coinfection
AND21520	21M / B.1.1.529	Unassigned	14	 Omicron BA.1 – Omicron BA.2 coinfection

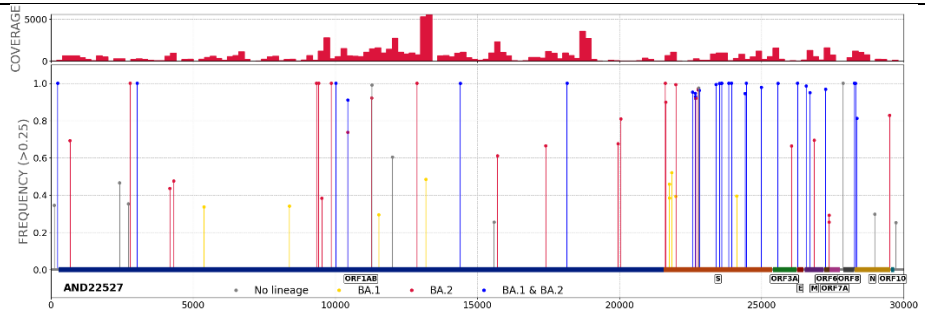
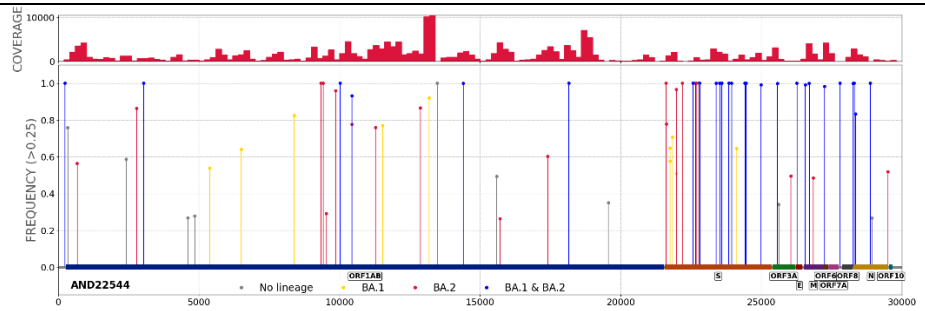
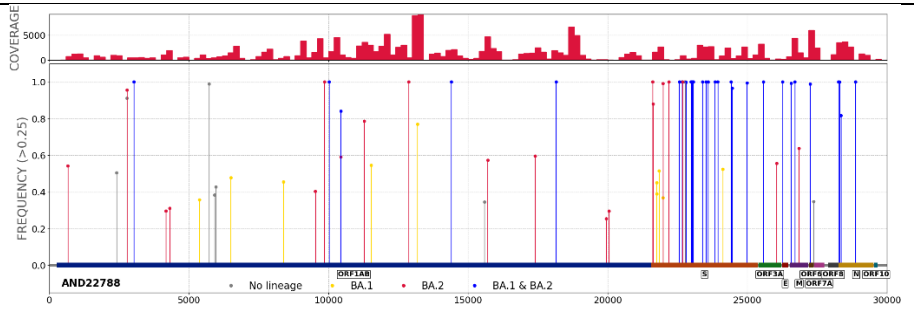
AND21550	21L / BA.2.23	Unassigned	-	 Omicron BA.1 – Omicron BA.2 coinfection
AND21552	recombinant / XT (BA.1-BA.2)	Unassigned	9	 Omicron BA.1 – Omicron BA.2 coinfection
AND21554	recombinant / XT (BA.1-BA.2)	Unassigned	-	 Omicron BA.1 – Omicron BA.2 coinfection

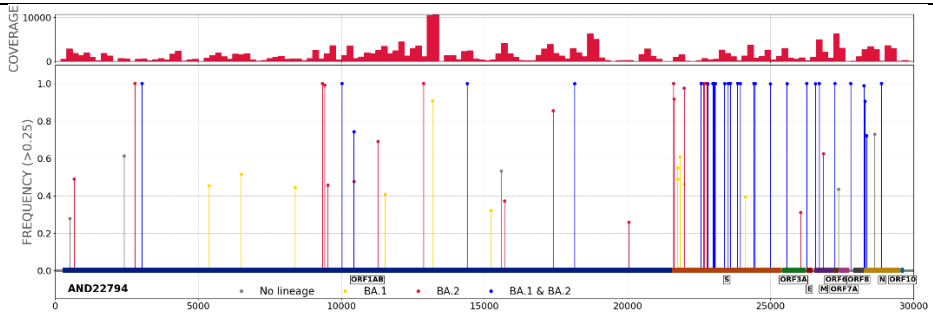
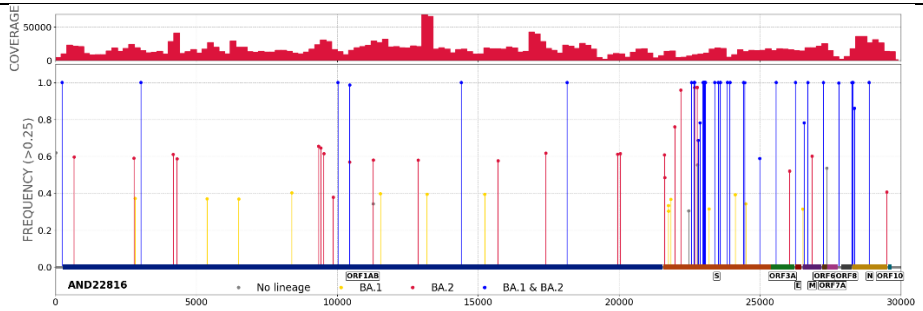
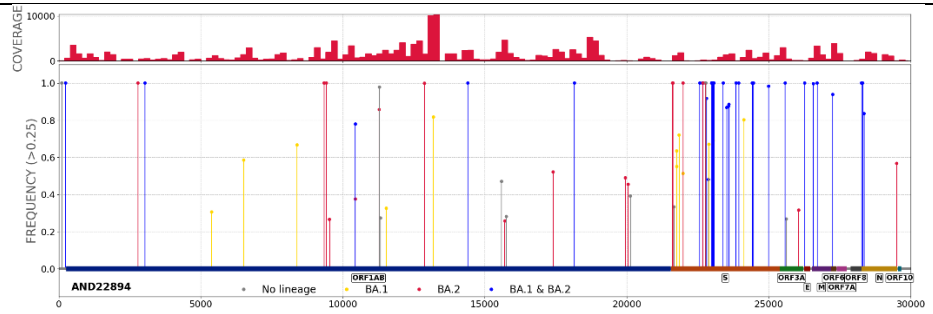
AND21702	21M / B.1.1.529	Unassigned	-	 Omicron BA.1 – Omicron BA.2 coinfection
AND21845	21L / BA.2	Unassigned	-	 Omicron BA.1 – Omicron BA.2 coinfection
AND21903	21K / BA.1.1	Unassigned	4	 Omicron BA.1 – Omicron BA.2 coinfection

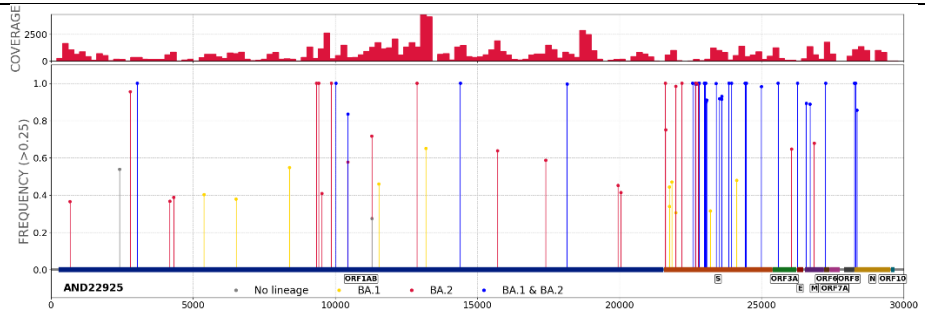
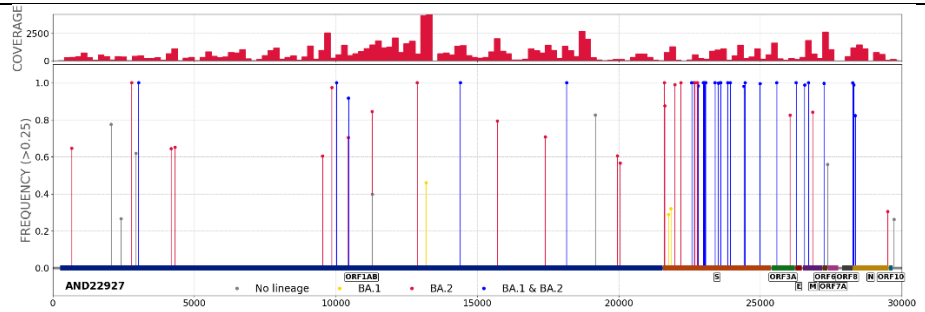
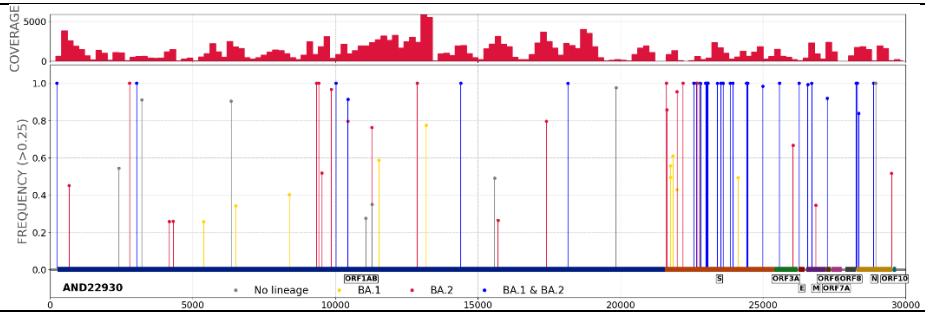
AND21907	recombinant / XT (BA.1-BA.2)	Unassigned	1	 Omicron BA.1 – Omicron BA.2 coinfection
AND21955	21L / BA.2.23	Unassigned	8	 Omicron BA.1 – Omicron BA.2 coinfection
AND21956	recombinant / XT (BA.1-BA.2)	Unassigned	20	 Omicron BA.1 – Omicron BA.2 coinfection

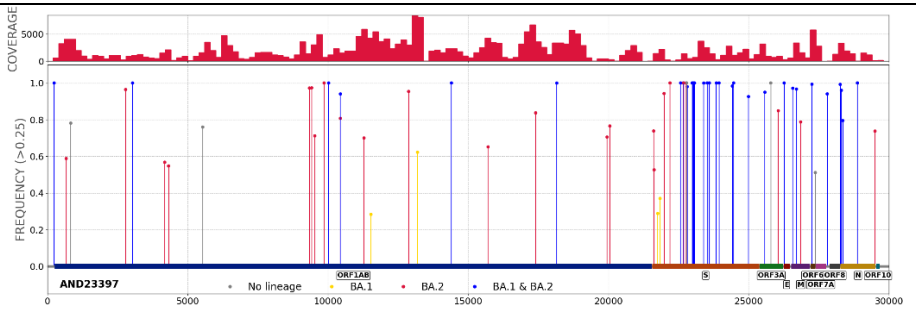
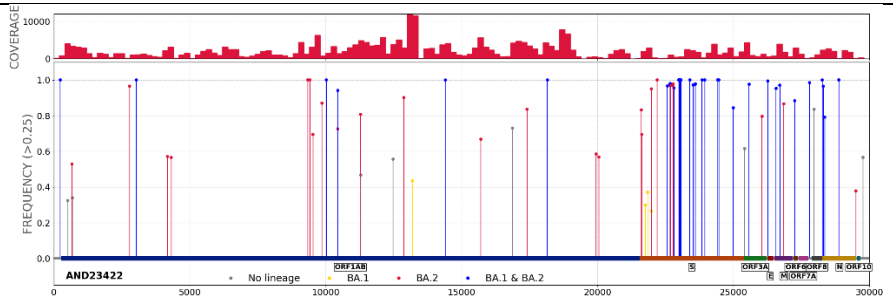
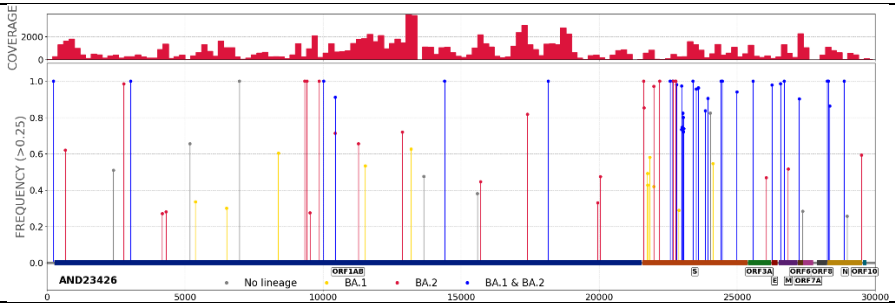
AND22019	recombinant / XT (BA.1-BA.2)	Unassigned	-	 Omicron BA.1 – Omicron BA.2 coinfection
AND22023	21L / BA.2.23	Unassigned	-	 Omicron BA.1 – Omicron BA.2 coinfection
AND22078	21M / B.1.1.529	Unassigned	-	 Omicron BA.1 – Omicron BA.2 coinfection

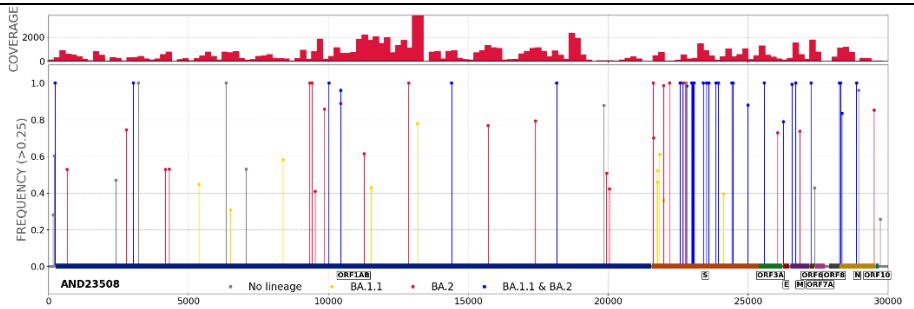
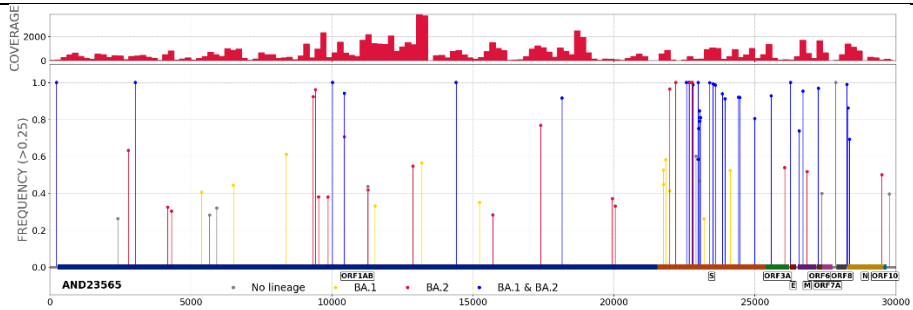
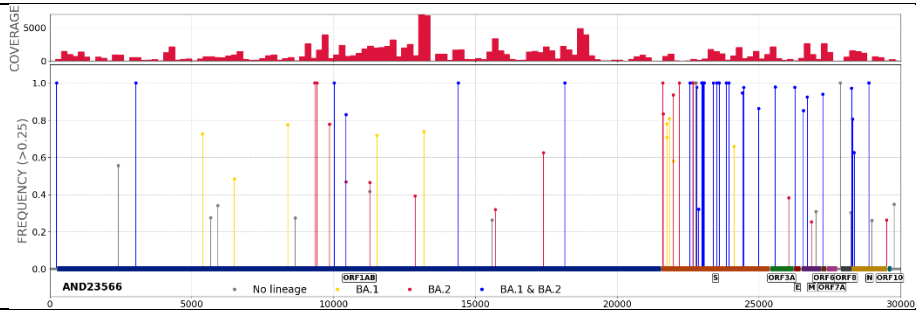
AND22272	21M / B.1.1.529	Unassigned	-	 Omicron BA.1 – Omicron BA.2 coinfection
AND22275	21M / B.1.1.529	Unassigned	-	 Omicron BA.1 – Omicron BA.2 coinfection
AND22431	21L / BA.2.23	Unassigned	9	 Omicron BA.1 – Omicron BA.2 coinfection

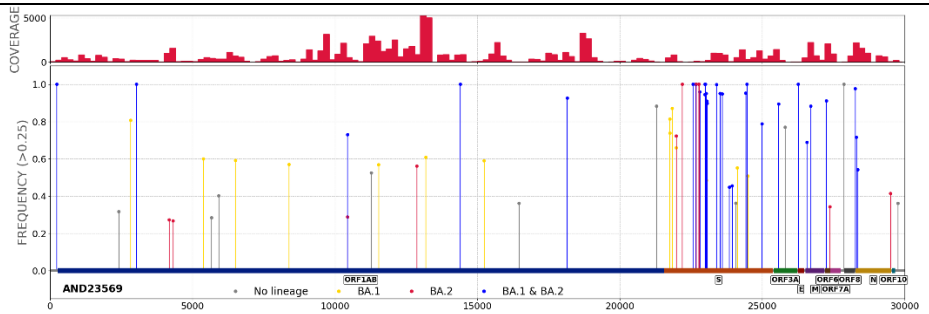
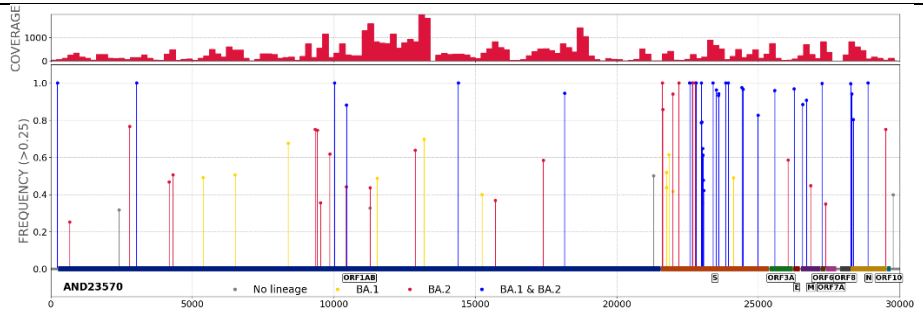
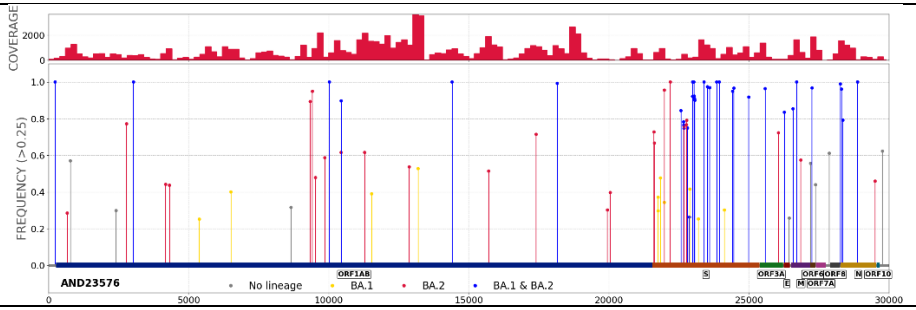
AND22527	21L / BA.2.23	Unassigned	18	 Omicron BA.1 – Omicron BA.2 coinfection
AND22544	recombinant / XT (BA.1-BA.2)	Unassigned	18	 Omicron BA.1 – Omicron BA.2 coinfection
AND22788	recombinant / XT (BA.1-BA.2)	Unassigned	10	 Omicron BA.1 – Omicron BA.2 coinfection

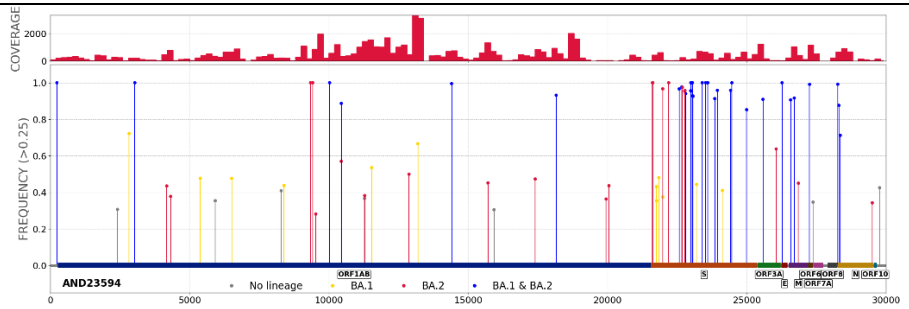
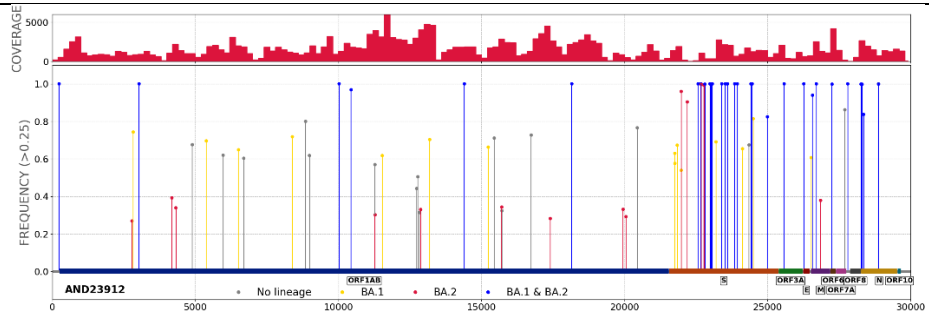
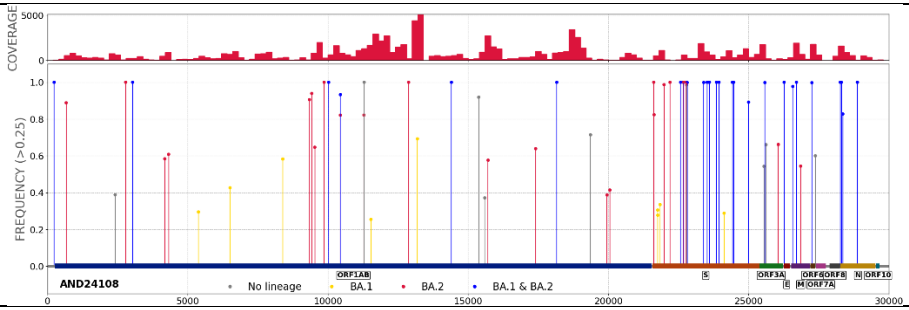
AND22794	recombinant / XT (BA.1-BA.2)	Unassigned	9	 Omicron BA.1 – Omicron BA.2 coinfection
AND22816	21M / B.1.1.529	Unassigned	-	 Omicron BA.1 – Omicron BA.2 coinfection
AND22894	recombinant / XT (BA.1-BA.2)	Unassigned	7	

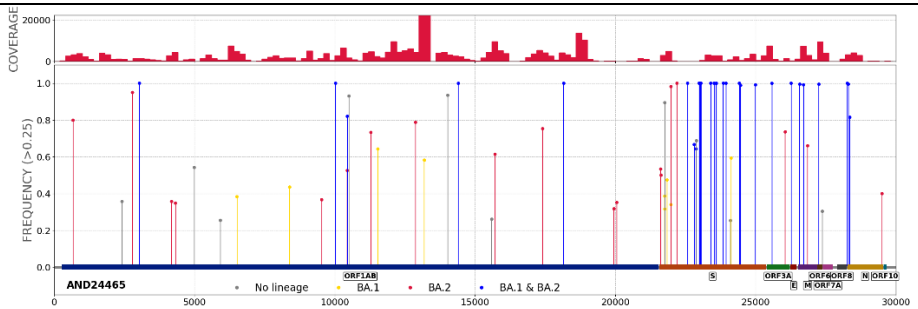
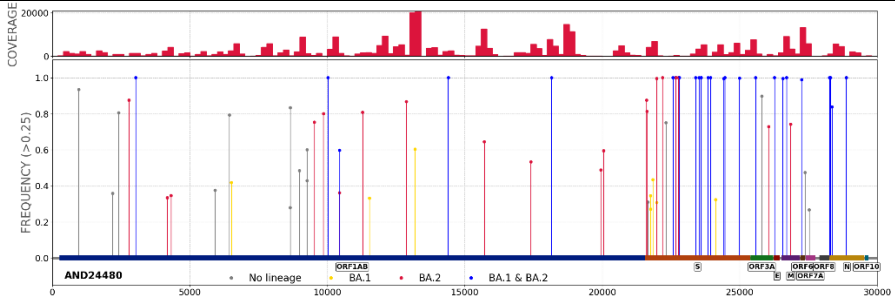
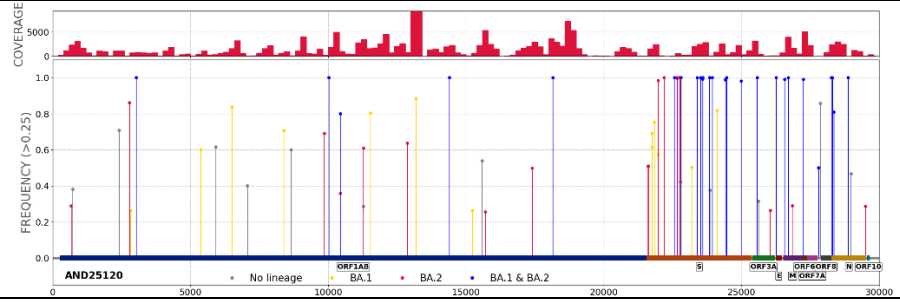
AND22925	recombinant / XT (BA.1-BA.2)	Unassigned	-	Omicron BA.1 – Omicron BA.2 coinfection 
AND22927	21L / BA.2.23	Unassigned	-	Omicron BA.1 – Omicron BA.2 coinfection 
AND22930	recombinant / XT (BA.1-BA.2)	Unassigned	11	Omicron BA.1 – Omicron BA.2 coinfection 

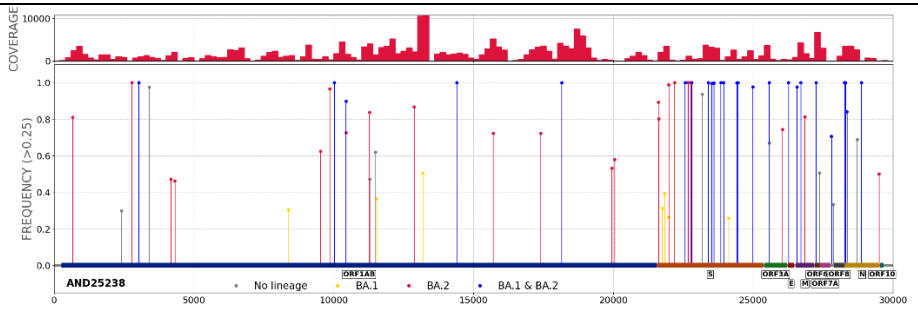
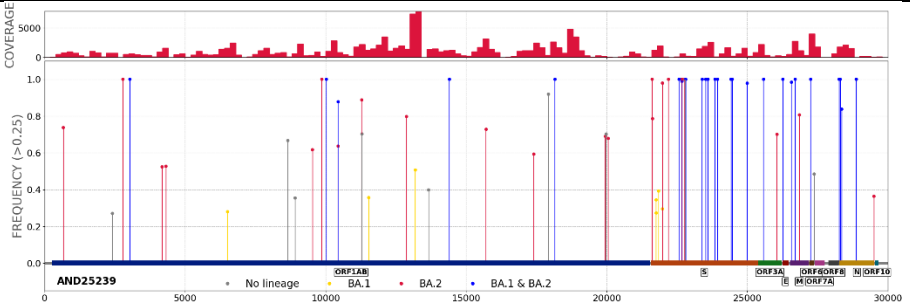
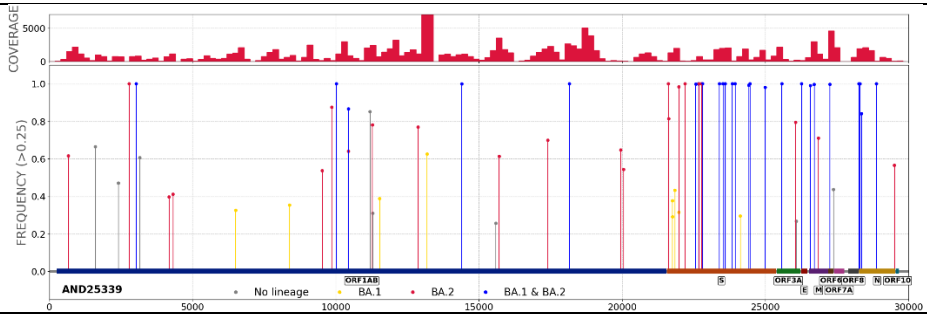
				Omicron BA.1 – Omicron BA.2 coinfection
AND23397	21L / BA.2.23	Unassigned	1	
				Omicron BA.1 – Omicron BA.2 coinfection
AND23422	21L / BA.2.23	Unassigned	8	
				Omicron BA.1 – Omicron BA.2 coinfection
AND23426	recombinant / XT (BA.1-BA.2)	Unassigned	-	

				Omicron BA.1 – Omicron BA.2 coinfection
AND23508	recombinant / XQ (BA.1.1-BA.2)	Unassigned	-	
				Omicron BA.1 – Omicron BA.2 coinfection
AND23565	21M / B.1.1.529	Unassigned	26	
				Omicron BA.1 – Omicron BA.2 coinfection
AND23566	21M / B.1.1.529	Unassigned	-	

				Omicron BA.1 – Omicron BA.2 coinfection
AND23569	21M /B.1.1.529	Unassigned	2	
				Omicron BA.1 – Omicron BA.2 coinfection
AND23570	21M /B.1.1.529	Unassigned	-	
				Omicron BA.1 – Omicron BA.2 coinfection
AND23576	21M / B.1.1.529	Unassigned	-	

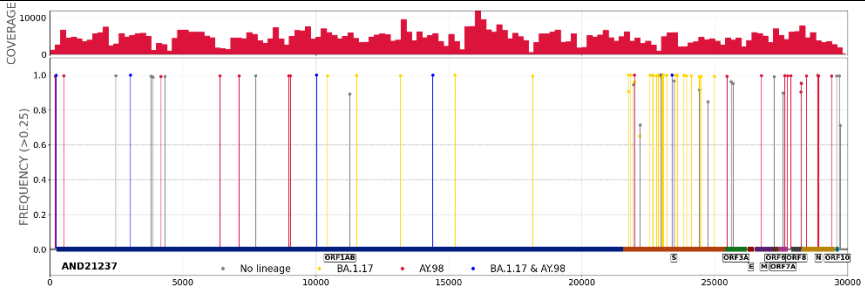
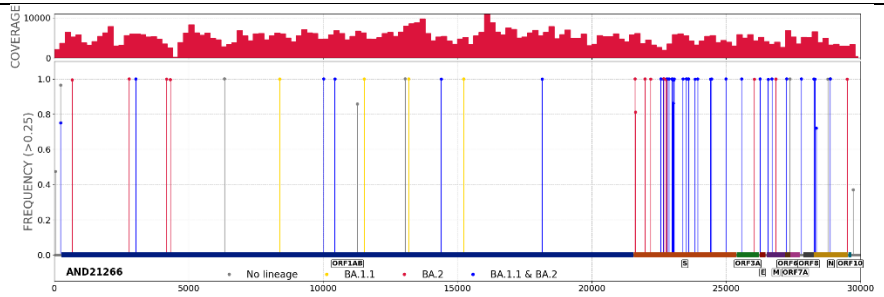
				Omicron BA.1 – Omicron BA.2 coinfection
AND23594	21M / B.1.1.529	Unassigned	-	
				Omicron BA.1 – Omicron BA.2 coinfection
AND23912	21M / B.1.1.529	Unassigned	4	
				Omicron BA.1 – Omicron BA.2 coinfection
AND24108	recombinant / XT (BA.1-BA.2)	Unassigned	-	

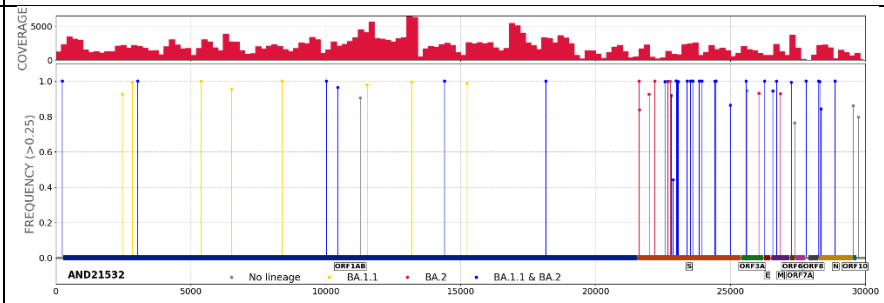
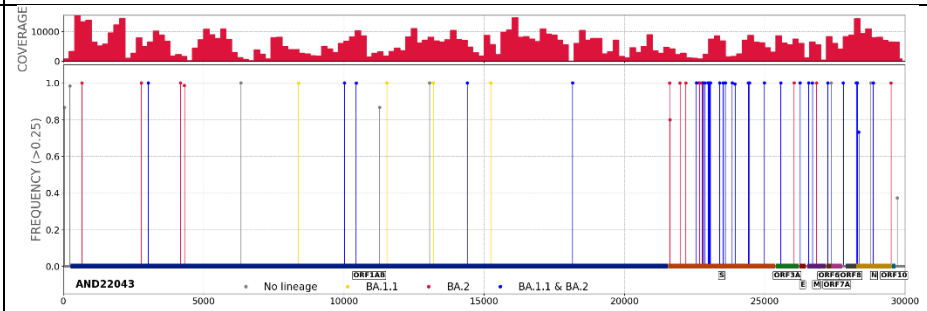
				Omicron BA.1 – Omicron BA.2 coinfection
AND24465	21M / B.1.1.529	Unassigned	-	 Omicron BA.1 – Omicron BA.2 coinfection
AND24480	recombinant / XT (BA.1-BA.2)	Unassigned	-	 Omicron BA.1 – Omicron BA.2 coinfection
AND25120	21M / B.1.1.529	Unassigned	1	

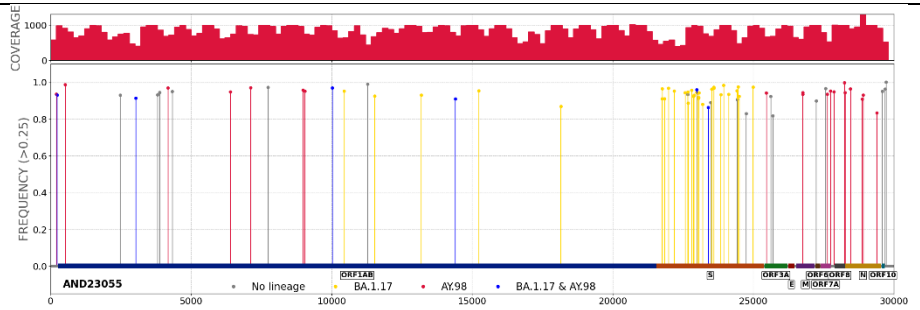
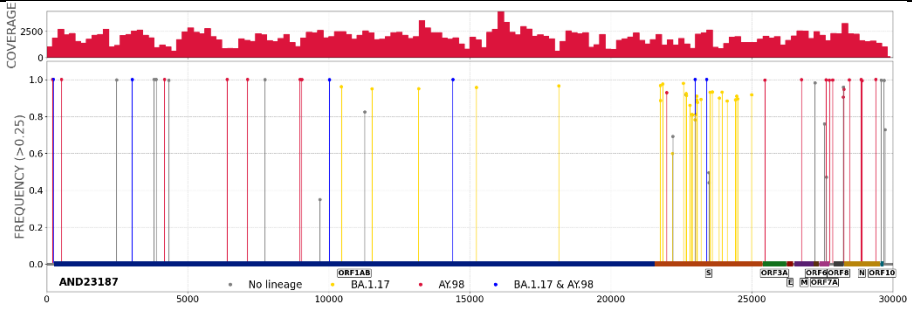
				Omicron BA.1 – Omicron BA.2 coinfection
AND25238	recombinant / XT (BA.1-BA.2)	Unassigned	-	
				Omicron BA.1 – Omicron BA.2 coinfection
AND25239	21M / B.1.1.529	Unassigned	-	
				Omicron BA.1 – Omicron BA.2 coinfection
AND25339	recombinant / XT (BA.1-BA.2)	Unassigned	-	

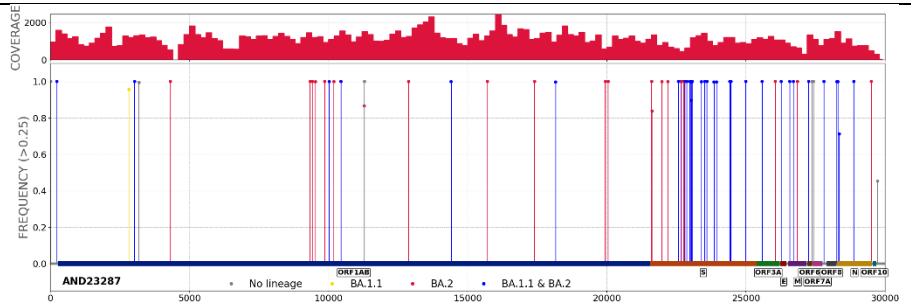
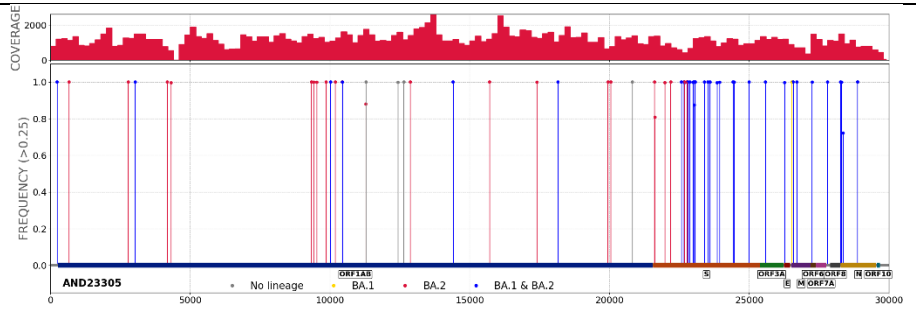
				Omicron BA.1 – Omicron BA.2 coinfection

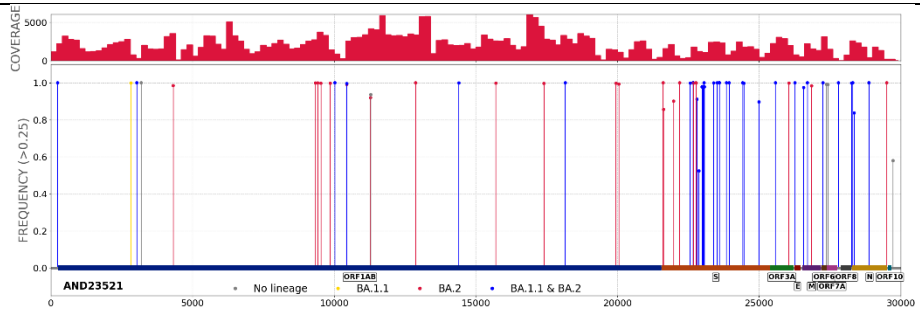
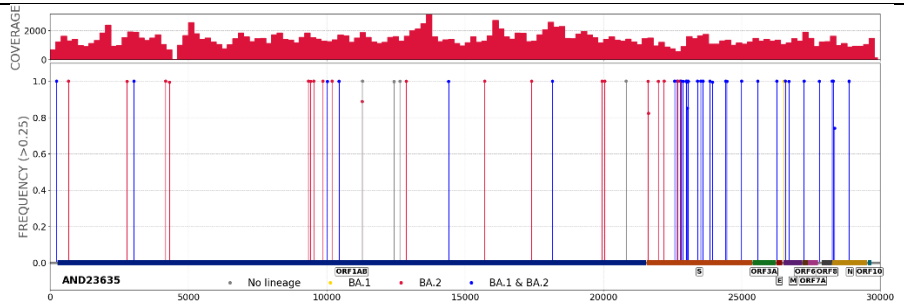
Table S3. Potential SARS-CoV-2 recombinant

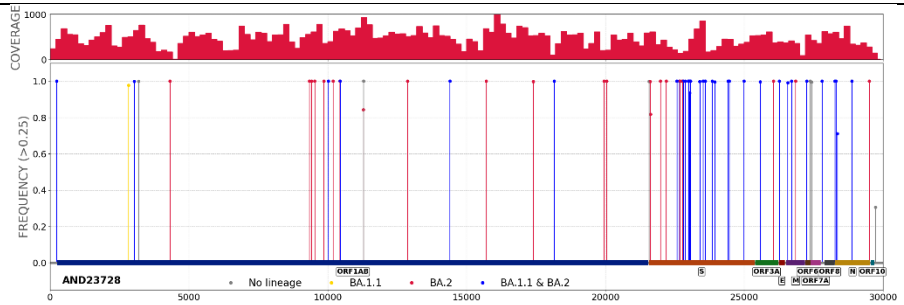
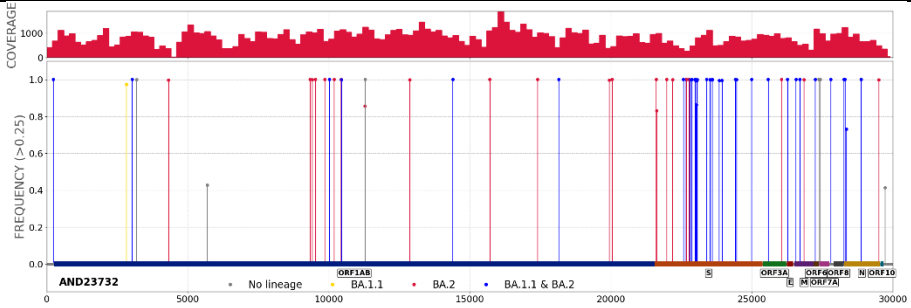
Sample	Clade / nextclade pango (Nextclade)	Lineage (Pangolin)	Breakpoints output (sc2rf)	Lollipop plot
AND21237*	recombinant / XD (AY.4-BA.1)	AY.93	10029-10449 (nsp5) 25000-25469 (S or ORF3a)	 Novel recombinant Delta-Omicron-Delta (Illumina sequencing)
AND21266	recombinant / XM (BA.1.1-BA.2)	Unassigned	5386-8393 (nsp3) 20055-21617 (nsp15 or S)	

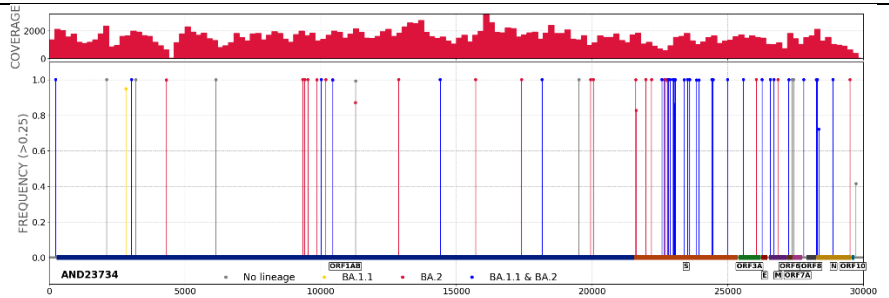
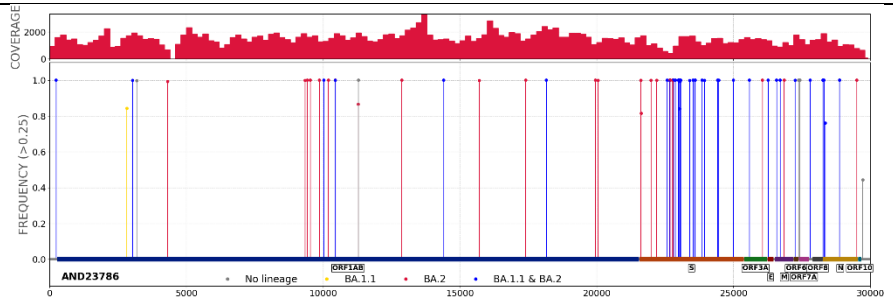
				Novel recombinante Omicron BA.2-BA.1-BA.2
AND21532	recombinant / XM (BA.1.1- BA.2)	Unassigned	20055-21618 (nsp15 or S)	 Breakpoint close to XM (17410-19995)
AND22043	recombinant / XM (BA.1.1- BA.2)	Unassigned	5386-8393 (nsp3) 20055-21618 (nsp15 or S)	 Novel recombinant Omicron BA.2-BA.1-BA.2

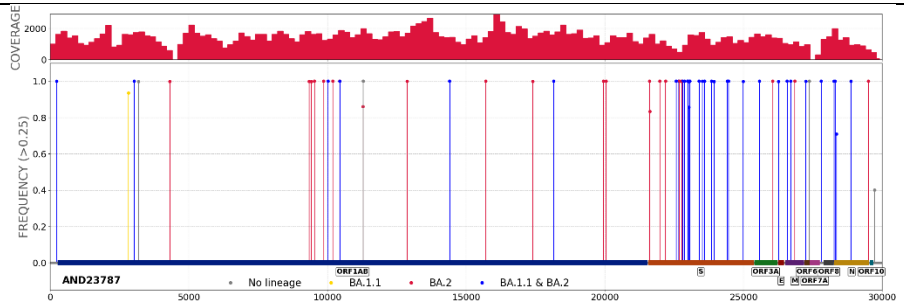
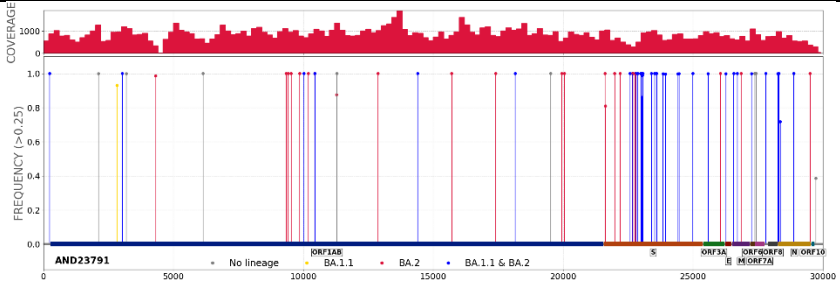
AND23055*	recombinant / XD (AY.4 – BA.1)	BA.1	10029-10449 (nsp5) 25000-25469 (S or ORF3a)	 Novel recombinant Delta-Omicron-Delta (Nanopore sequencing)
AND23187*	recombinant / XD (AY.4 – BA.1)	BA.1	10029-10449 (nsp5) 25000-25469 (S or ORF3a)	 Novel recombinant Delta-Omicron-Delta (Illumina sequencing)

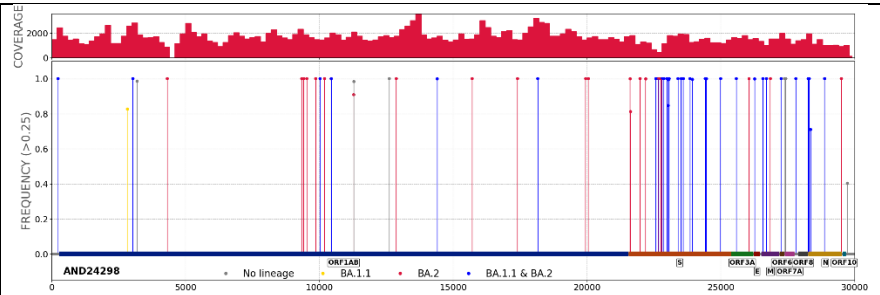
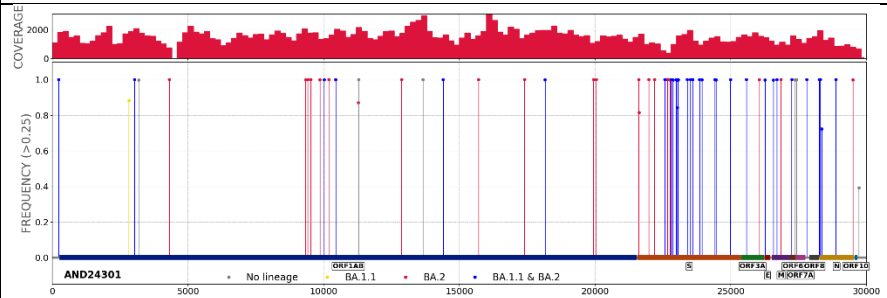
AND23287	recombinant / XQ (BA.1.1- BA.2)	BA.2	4184-4321 (nsp3)	 Breakpoint close to XQ (4322-5385) or XR (4322-4891) recombinant
AND23305	recombinant / XT (BA.1-BA.2)	BA.2	25584-26060 (S or ORF3a)	 Breakpoint close to XT (26062-26528) and XAE (24506-26048)

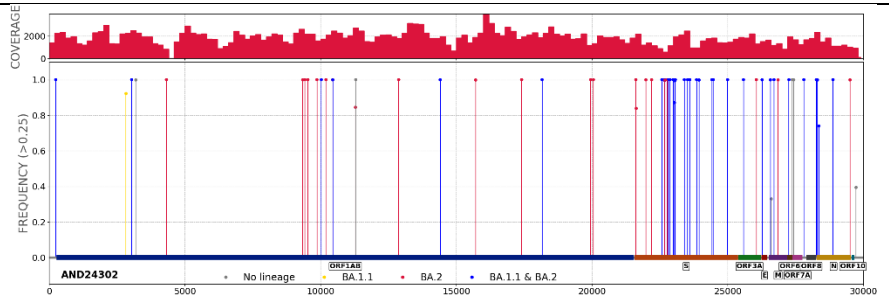
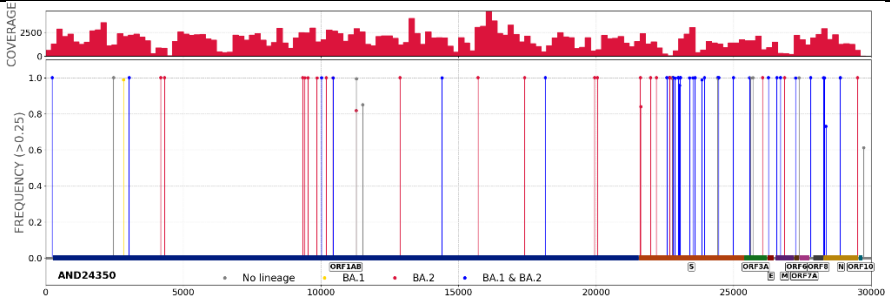
AND23521	recombinant / XQ (BA.1.1- BA.2)	BA.2	4184-4321 (nsp3)	 Breakpoint close to XQ (4322-5385) or XR (4322-4891) recombinant
AND23635	recombinant / XT (BA.1-BA.2)	BA.2	25584-26060 (S or ORF3a)	 Breakpoint close to XT (26062-26528) and XAE (24506-26048)

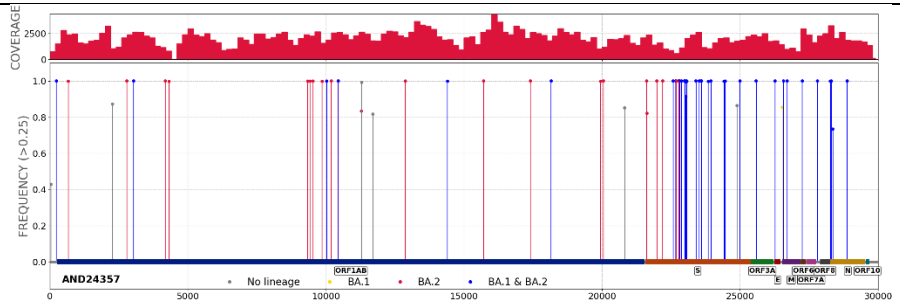
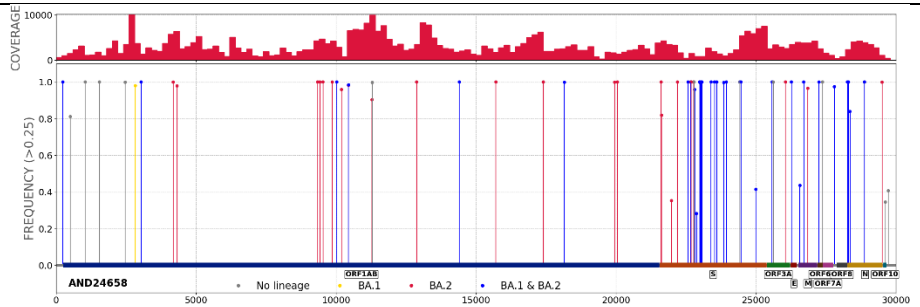
AND23728	recombinant / XQ (BA.1.1-BA.2)	BA.2	4184-4321 (nsp3)	 Breakpoint close to XQ (4322-5385) or XR (4322-4891) recombinant
AND23732	recombinant / XQ (BA.1.1-BA.2)	BA.2	4184-4321 (nsp3)	 Breakpoint close to XQ (4322-5385) or XR (4322-4891) recombinant

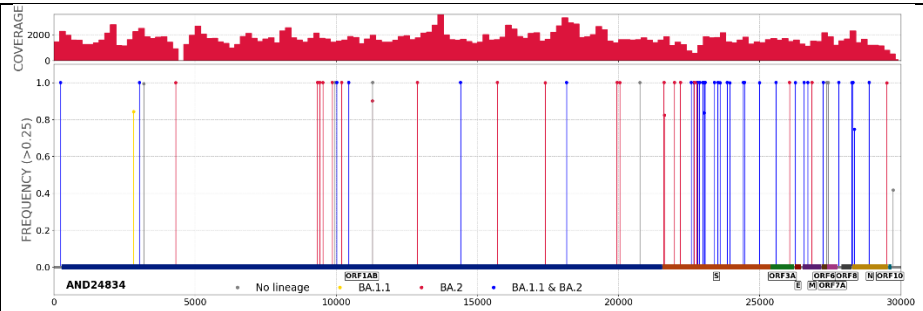
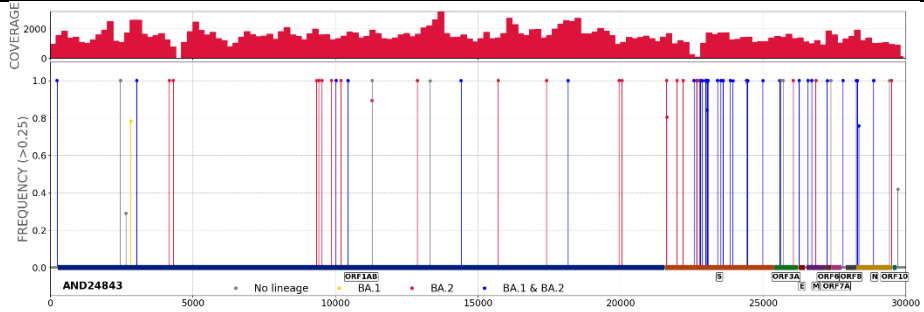
AND23734	recombinant / XQ (BA.1.1-BA.2)	BA.2	4184-4321 (nsp3)	 Breakpoint close to XQ (4322-5385) or XR (4322-4891) recombinant
AND23786	recombinant / XQ (BA.1.1-BA.2)	BA.2	4184-4321 (nsp3)	 Breakpoint close to XQ (4322-5385) or XR (4322-4891) recombinant

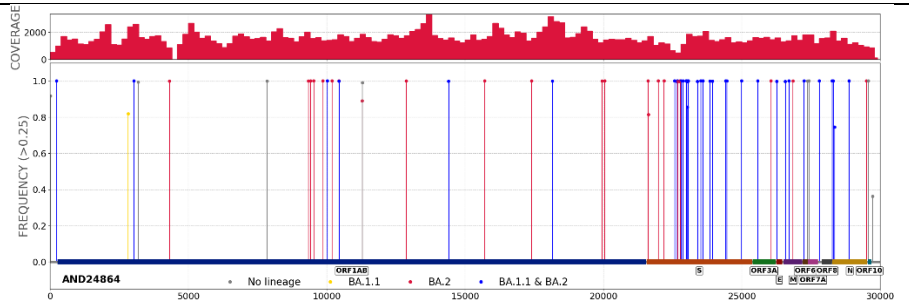
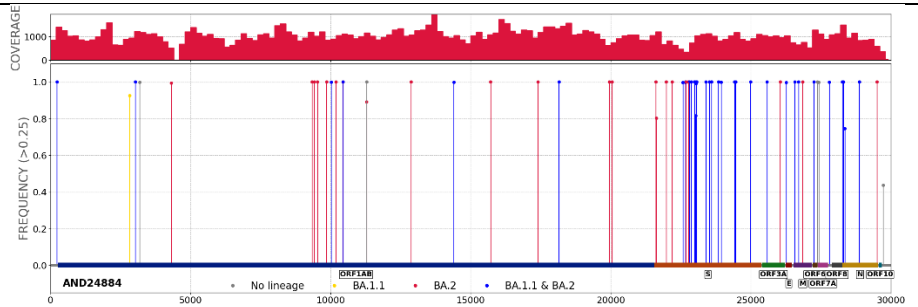
AND23787	recombinant / XQ (BA.1.1-BA.2)	BA.2	4184-4321 (nsp3)	 Breakpoint close to XQ (4322-5385) or XR (4322-4891) recombinant
AND23791	recombinant / XQ (BA.1.1-BA.2)	BA.2	4184-4321 (nsp3)	 Breakpoint close to XQ (4322-5385) or XR (4322-4891) recombinant

AND24298	recombinant / XQ (BA.1.1-BA.2)	BA.2	4184-4321 (nsp3)	 Breakpoint close to XQ (4322-5385) or XR (4322-4891) recombinant
AND24301	recombinant / XQ (BA.1.1-BA.2)	BA.2	4184-4321 (nsp3)	 Breakpoint close to XQ (4322-5385) or XR (4322-4891) recombinant

AND24302	recombinant / XQ (BA.1.1-BA.2)	BA.2	4184-4321 (nsp3)	 Breakpoint close to XQ (4322-5385) or XR (4322-4891) recombinant
AND24350	recombinant / XN (BA.1-BA.2)	BA.2	3037-4184 (nsp3)	 Breakpoint close to XN (2834-4183)

AND24357	recombinant / XT (BA.1-BA.2)	BA.2	25584-26060 (S or ORF3a)	 Breakpoint close to XT (26062-26528) and XAE (24506-26048)
AND24658	recombinant / XN (BA.1-BA.2)	BA.2	3037-4184 (nsp3)	 Breakpoint close to XN (2834-4183)

AND24834	recombinant / XQ (BA.1.1-BA.2)	BA.2	4184-4321 (nsp3)	 Breakpoint close to XQ (4322-5385) or XR (4322-4891) recombinant
AND24843	recombinant / XN (BA.1-BA.2)	BA.2	3037-4184 (nsp3)	 Breakpoint close to XN (2834-4183)

AND24864	recombinant / XQ (BA.1.1-BA.2)	BA.2	4184-4321 (nsp3)	 Breakpoint close to XQ (4322-5385) or XR (4322-4891) recombinant
AND24884	recombinant / XQ (BA.1.1-BA.2)	BA.2	4184-4321 (nsp3)	 Breakpoint close to XQ (4322-5385) or XR (4322-4891) recombinant

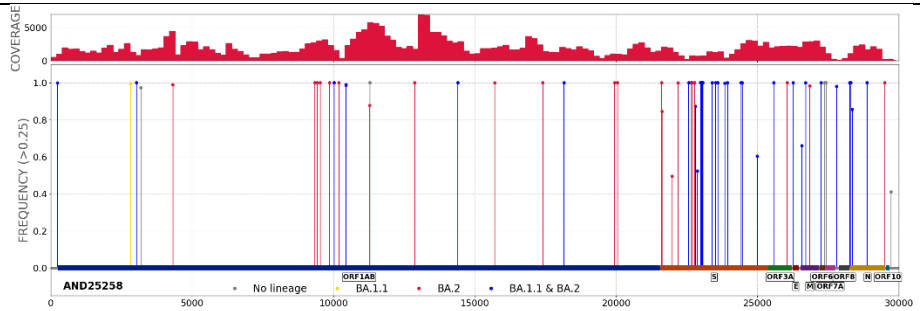
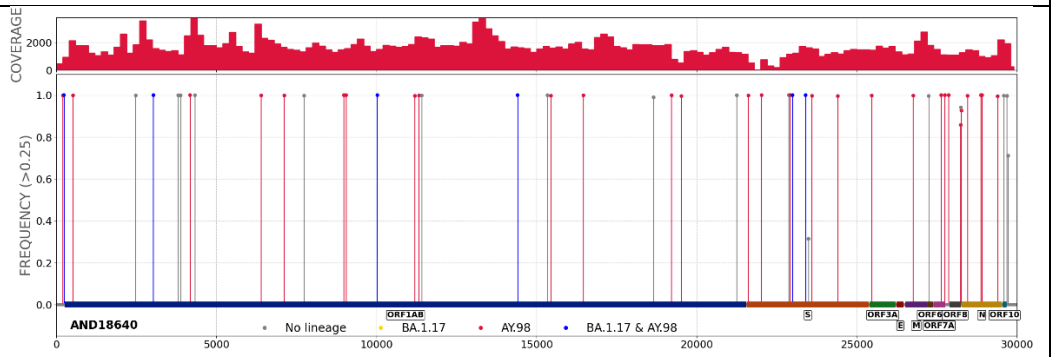
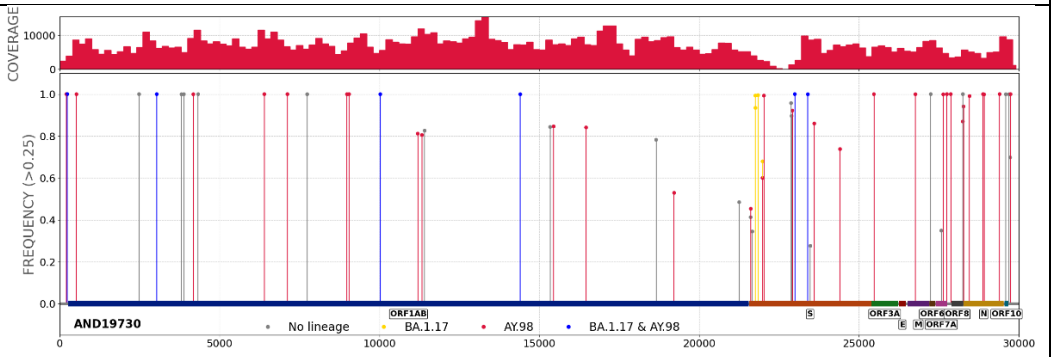
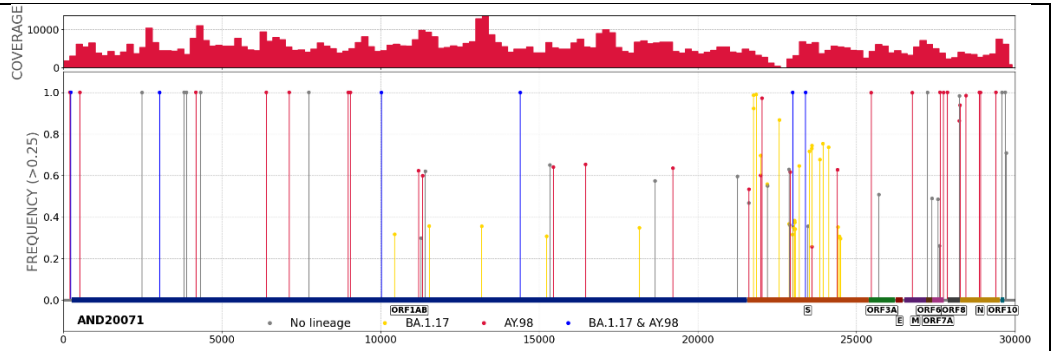
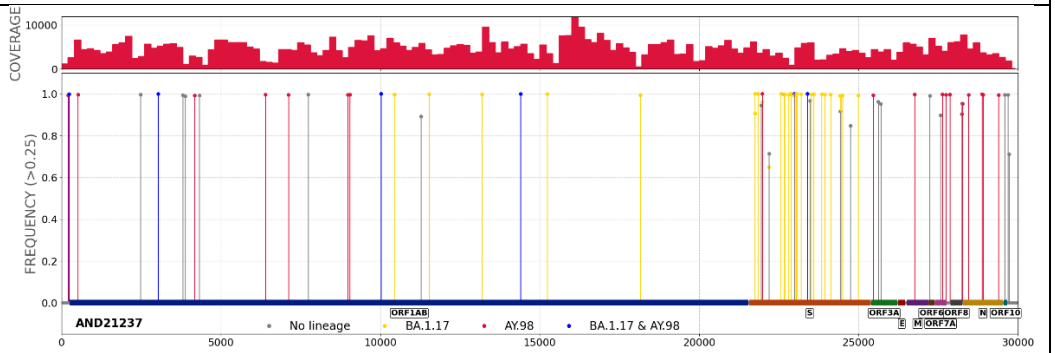
AND25258	recombinant / XQ (BA.1.1-BA.2)	BA.2	4184-4321 (nsp3)	 Breakpoint close to XQ (4322-5385) or XR (4322-4891) recombinant

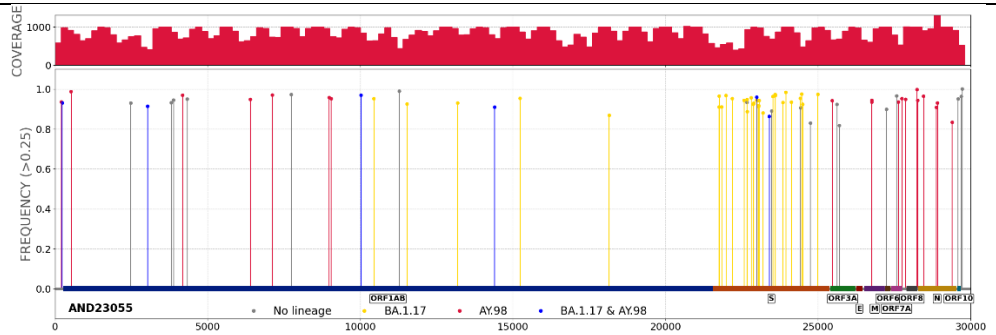
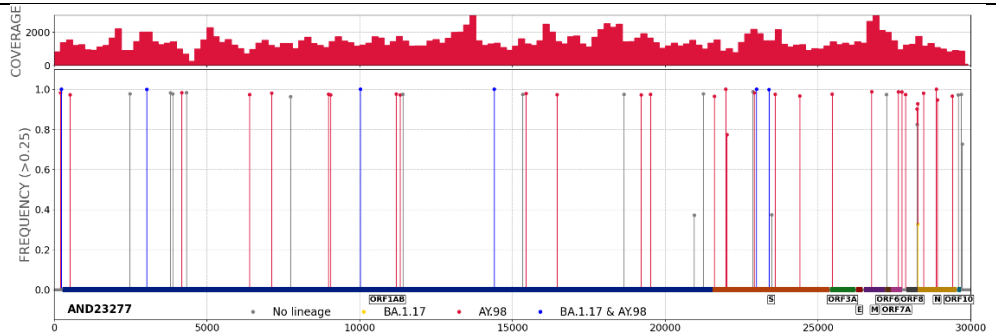
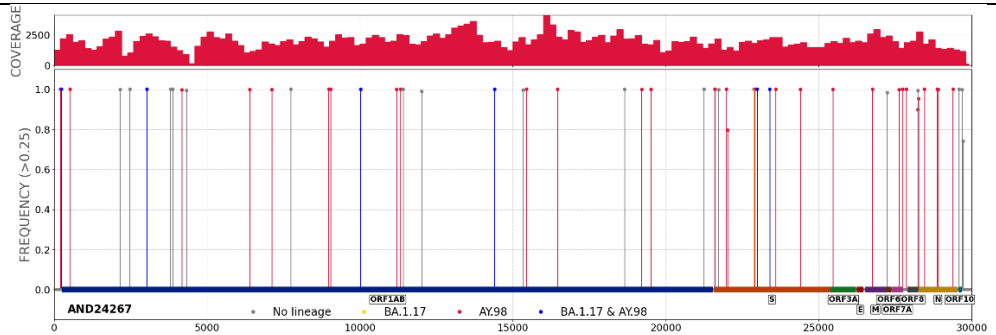
Table S4. Sequences of the family in which the emergence of a recombinant was observed

Sample	Event (C=Coinfection, R=Recombinant, D=Delta VOC)	Collection date	Localization (Hospital and Province)	ENA Sample ID
AND18640	D	2021-12-28	Hospital Universitario Reina Sofía (Córdoba)	SAMEA110403704
AND19730*	D	2022-02-02	Hospital Universitario Reina Sofía (Córdoba)	SAMEA110403705
AND20071*	C	2022-02-09	Hospital Universitario Reina Sofía (Córdoba)	SAMEA110403706
AND21237*	R	2022-03-02	Hospital Universitario Reina Sofía (Córdoba)	SAMEA110395597
AND23187*	R	2022-02-18	Hospital Universitario Reina Sofía (Córdoba)	SAMEA110395633
AND23055*	R	2022-03-02	Hospital Universitario Reina Sofía (Córdoba)	SAMEA110395673
AND23277*	D	2021-12-30	Hospital Universitario Reina Sofía (Córdoba)	SAMEA110403707
AND24267	D	2022-02-04	Hospital Universitario Reina Sofía (Córdoba)	SAMEA110403708

Table S5. Detailed Lolliplots of the sequences of the family in which the emergence of a recombinant was observed

Sample	Event (C=Coinfection, R=Recombinant, D=Delta VOC)	Lollipop plot
AND18640	D	
AND19730*	D	

AND20071*	C	
AND21237*	R	
AND23187*	R	

AND23055*	R	
AND23277*	D	
AND24267	D	

The Andalusian COVID-19 Sequencing Initiative

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