



# Emergence of Novel Unique Recombinant forms and Multiple Subtypes in Gag-Pol Region of HIV-1 in Punjab, Pakistan

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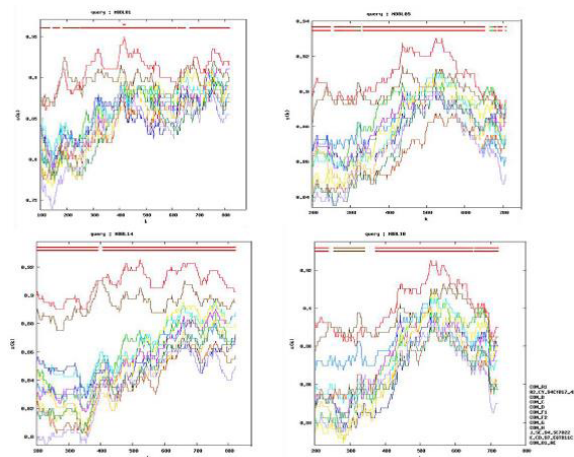
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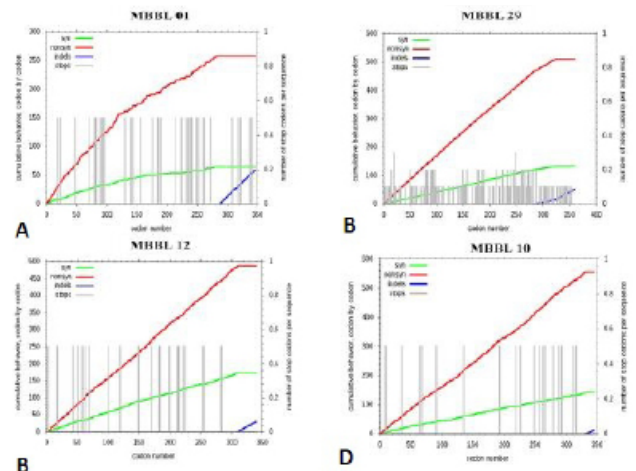
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Supplementary Fig. S1. RIP: Recombination analysis of the Gag isolates MBBL01, MBBL05, MBBL14 and MBBL10 (S2A-S2D). Recombination analysis software with following parameters was used: Window Size = 200, Confidence threshold = 0.9, Gap Option = 3, and Multistate characters = yes (S2A-S2D).



Supplementary Fig. S2. Cumulative behavior by SNAP analysis shown in isolates: A, isolate MBBL01; B, isolate MBBL29; C, isolate MBBL12; D, isolate MBBL10. Ratios of synonymous to non-synonymous mutations.

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**Supplementary Table S1. Ratios of Synonymous to non-synonymous mutations of HIV-1 isolates. Ratios are shown as Ds, Dn and Standard Deviation Ds/Dn.**

| Isolate ID | Ds     | Dn     | Ratio of Ds/Dn | Standard Deviation | Ds/Dn | HIV subtype |
|------------|--------|--------|----------------|--------------------|-------|-------------|
| MBBL01     | 3.6882 | 2.4332 | 1.5158         | 2.191493           |       | A1          |
| MBBL10     | 3.6841 | 2.5988 | 1.4176         | 1.0247             |       | CRF02_AG    |
| MBBL12     | 2.0643 | 2.8914 | 0.7139         | 0.3498             |       | A1          |
| MBBL29     | 4.4032 | 2.6198 | 1.6808         | 1.0285             |       | A1          |
| MBBL03     | 4.3144 | 2.0370 | 2.1181         | 1.0674             |       | URF         |
| MBBL09     | 4.2165 | 3.1316 | 1.3464         | 1.0119             |       | URF         |
| MBBL30     | 1.9788 | 3.8806 | 0.5099         | 0.9338             |       | A1          |
| MBBL13     | 3.6070 | 2.0760 | 1.7371         | 0.8838             |       | A1          |
| MBBL07     | 2.0720 | 2.7431 | 0.7554         | 0.27373            |       | A1          |