

## Supplementary material

**Supplementary Table 1** Cytokine, chemokine and growth factor concentrations (pg/ml) in HIV-uninfected ALRI cases versus controls

<b>Geometric mean plasma cytokine, chemokine and growth factor concentrations (95% CI; pg/ml)</b>			
	<b>Cases</b>	<b>Controls</b>	<b>p-value</b>
	<b>n= 86*</b>	<b>n= 48*</b>	
<i>Cytokines</i>			
<b>G-CSF</b>	<b>522.5 (461.3-591.8)</b>	<b>382.3 (311.6-469.1)</b>	<b>0.004</b>
<b>GM-CSF</b>	0.45 (0.28-0.73)	0.51 (0.26-0.99)	0.761
<b>IFN-<math>\alpha</math></b>	159.2 (143.6-176.5)	139.8 (123.3-158.5)	0.123
<b>IFN-<math>\gamma</math></b>	<b>68.8 (58.3-81.1)</b>	<b>46.4 (32.7-65.8)</b>	<b>0.023</b>
<b>IL-1<math>\beta</math></b>	7.00 (4.89-10.01)	9.88 (6.13-15.92)	0.250
<b>IL-1RA</b>	1087.6 (843.0-1403.1)	924.3 (704.2-1213.3)	0.419
<b>IL-2</b>	7.71 (5.89-10.09)	7.12 (5.03-10.07)	0.717
<b>IL-2R</b>	2184.1 (1972.2-2418.8)	2196.4 (1676.8-2877.0)	0.963
<b>IL-4</b>	34.9 (27.7-43.8)	29.6 (21.1-41.6)	0.412

<b>IL-5</b>	<b>11.9 (8.8-16.1)</b>	<b>6.98 (4.37-11.16)</b>	<b>0.032</b>
<b>IL-6</b>	23.9 (17.0-33.7)	14.1 (9.42-21.1)	0.057
<b>IL-7</b>	36.5 (24.3-54.6)	33.4 (24.1-46.3)	0.741
<b>IL-8</b>	31.4 (21.1-46.8)	20.7 (11.8-36.3)	0.223
<b>IL-10</b>	36.1 (26.1-49.9)	27.6 (16.8-45.3)	0.348
<b>IL-12</b>	494.2 (444.2-549.8)	449.2 (396.8-508.6)	0.264
<b>IL-13</b>	90.5 (70.7-115.8)	66.4 (45.4-97.3)	0.159
<b>IL-15</b>	60.0 (39.9-90.1)	68.9 (41.3-114.9)	0.677
<b>IL-17</b>	6.75 (5.68-8.01)	6.53 (5.29-8.07)	0.818
<b>TNF-<math>\alpha</math></b>	45.1 (38.1-53.3)	32.9 (21.9-49.4)	0.097

### *Chemokines*

<b>Eotaxin</b>	95.1 (83.7-108.0)	92.4 (75.3-113.6)	0.806
<b>IP-10</b>	169.0 (126.9-225.0)	152.5 (118.9-195.6)	0.633
<b>MCP-1</b>	<b>636.7 (520.8-778.3)</b>	<b>422.5 (341.5-522.9)</b>	<b>0.008</b>
<b>MIG</b>	233.2 (174.7-311.3)	281.4 (219.2-361.4)	0.383
<b>MIP-1<math>\alpha</math></b>	113.2 (100.0-128.2)	104.8 (82.9-132.7)	0.524

<b>MIP-1<math>\beta</math></b>	189.1 (165.0-216.7)	153.3 (122.3-192.1)	0.093
<b>RANTES</b>	6552.6 (5842.2-7349.3)	7161.2 (6158.2-8327.6)	0.353

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**Growth Factors**

<b>EGF</b>	19.9 (15.1-26.3)	22.9 (15.1-34.7)	0.572
<b>FGF-basic</b>	10.6 (7.88-14.1)	10.6 (7.2-15.7)	0.988
<b>HGF</b>	750.4 (624.4-901.8)	842.6 (643.6-1103.0)	0.467
<b>VEGF</b>	13.2 (9.55-18.2)	10.7 (6.99-16.47)	0.446

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\* n for ALRI cases and controls may vary for each cytokine depending on number of samples excluded because they were above %CV.

**Supplementary Table 2** Cytokine, chemokine and growth factor concentrations (pg/ml) in HIV-infected versus HIV-uninfected ALRI cases

<b>Geometric Mean plasma cytokine, chemokine and growth factor concentrations (95% CI; pg/ml)</b>			
	<b>HIV-infected ALRI cases</b>	<b>HIV-uninfected ALRI cases</b>	<b>p-value</b>
	<b>n= 15*</b>	<b>n= 86*</b>	
<b>Cytokines</b>			
<b>G-CSF</b>	375.0 (193.3-727.5)	522.5 (461.3-591.8)	0.094
<b>GM-CSF</b>	0.88 (0.17-4.42)	0.45 (0.28-0.73)	0.309
<b>IFN-<math>\alpha</math></b>	<b>111.6 (79.9-166.0)</b>	<b>159.2 (143.6-176.5)</b>	<b>0.015</b>
<b>IFN-<math>\gamma</math></b>	<b>35.2 (18.9-65.57)</b>	<b>68.8 (58.3-81.1)</b>	<b>0.008</b>
<b>IL-1<math>\beta</math></b>	9.24 (3.69-23.2)	7.00 (4.89-10.01)	0.550
<b>IL-1RA</b>	1337.7 (724.3-2470.8)	1087.6 (843.0-1403.1)	0.529
<b>IL-2</b>	5.46 (1.80-10.6)	7.71 (5.89-10.1)	0.324
<b>IL-2R</b>	2413.2 (1698.8-3427.9)	2184.1 (1972.2-2418.8)	0.477
<b>IL-4</b>	<b>12.6 (8.52-18.6)</b>	<b>34.9 (27.7-43.8)</b>	<b>0.001</b>
<b>IL-5</b>	<b>3.75 (1.71-7.77)</b>	<b>11.9 (8.84-16.1)</b>	<b>0.004</b>
<b>IL-6</b>	43.1 (17.8-104.6)	23.9 (167.0-33.7)	0.188

<b>IL-7</b>	21.7 (10.5-44.8)	33.4 (24.1-46.3)	0.303
<b>IL-8</b>	37.3 (10.3-1354.0)	31.4 (21.1-46.8)	0.751
<b>IL-10</b>	46.0 (21.4-98.8)	36.1 (26.1-49.9)	0.564
<b>IL-12</b>	468.2 (383.3-571.8)	494.2 (444.2-549.9)	0.687
<b>IL-13</b>	<b>23.3 (13.2-41.0)</b>	<b>90.5 (70.7-115.8)</b>	<b>&lt;0.001</b>
<b>IL-15</b>	119.8 (48.7-294.7)	60.0 (39.9-90.1)	0.187
<b>IL-17</b>	5.59 (4.44-7.05)	6.75 (5.68-8.01)	0.377
<b>TNF-<math>\alpha</math></b>	<b>19.6 (10.4-37.0)</b>	<b>45.1 (38.1-53.3)</b>	<b>0.001</b>

*Chemokines*

<b>Eotaxin</b>	97.4 (75.3-126.0)	95.1 (83.7-108.0)	0.882
<b>IP-10</b>	<b>396.2 (268.2-585.1)</b>	<b>169.0 (126.9-225.0)</b>	<b>0.019</b>
<b>MCP-1</b>	867.8 (497.5-1513.7)	636.7 (520.8-778.3)	0.243
<b>MIG</b>	<b>549.4 (354.6-851.3)</b>	<b>233.2 (174.7-311.3)</b>	<b>0.016</b>
<b>MIP-1<math>\alpha</math></b>	87.1 (66.2-114.7)	113.24 (100.0-128.2)	0.100
<b>MIP-1<math>\beta</math></b>	<b>106.9 (76.6-149.1)</b>	<b>189.1 (165.0-216.7)</b>	<b>0.002</b>
<b>RANTES</b>	8598.7 (6826.1-10831.5)	6552.6 (5842.2-7349.3)	0.064

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***Growth Factors***

<b>EGF</b>	13.5 (6.50-28.0)	19.9 (15.1-26.3)	0.282
<b>FGF-basic</b>	6.66 (2.77-16.0)	10.6 (7.88-14.1)	0.240
<b>HGF</b>	519.7 (313.0-862.8)	750.4 (624.4-901.8)	0.128
<b>VEGF</b>	8.01 (3.20-20.1)	13.2 (9.6-18.2)	0.246

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\* n for HIV-infected and HIV-uninfected ALRI cases may vary for each cytokine depending on number of samples excluded because they were above %CV.