**S1 Table A: Literature Reporting HIV Prevalence in Sickle Cell Disease**

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| **Reference** | **Year** | **HIV+ SCD** | **HIV+ Control Population** |
| Ouattara1 | 1988 | 15 of 67 (22.4%) transfused SCD children (Ivory Coast) | 2 of 320 (0.62%) NON-transfused non SCD children at same hospital/time period  |
| Wawero2  | 1989 | 0 of 198 transfused SCD children (Kenya) | 3 of 54 (7.4%) transfused non SCD children at same hospital/time period |
| Castro3  | 1990 | 0 of 88 transfused SCD (US) | No true control population in study. Authors compared HIV in SCD to estimated 70-80% transfused hemophilia patients infected with HIV in same time period |
| Wawero4  | 1992 | 1 of 44 (2.3%) transfused SCD (Kenya) | 3 of 4 (75%) transfused non SCD at same hospital/time period |
| Diagne5 | 2000 | 0 of 155 screened SCD patients (Senegal) | None |
| Ocak6 | 2006 | 0 of 210 transfused SCD patients (Turkey) | None |
| Dokekias7 | 2009 | 0 of 112 screened transfused SCD patients (Congo-Brazzaville) | None |
| Batina Agasa 8 | 2010 | 1 of 140 (0.7%) transfused SCD (Democratic Republic of Congo) | 184 of 3390 (5.4%) blood donors in same geographical area (p=0.022) |
| Moura Neto9  | 2011 | 11 of 1415 adult SCD (0.8%) (Brazil) | No true control population, but similar HIV prevalence as HIV reported in general population of same geographical area  |
| Nouraie 10  | 2012 | 94 HIV+ diagnosis with SCD diagnosis of 6517 (1.4%) discharges in US national hospital discharge data of African Americans >20 from 1997-2009 (US) | 13,256 HIV+ diagnosis without SCD diagnosis of 416,914 (3.2%) discharges in same database (p>0.0001) |
| Diarra11 | 2013 | 2 of 133 (1.5%) SCD prospectively screened for HIV (Mali) | None |

**S1 Table B: Cytokines and Chemokines Tested in SCD and non-SCD Controls**

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| Cytokine | Median (Range) Value SCD | Median (Range) Value non-SCD | FDR Corrected p value |
| IL-10 | 9.3 (3.6-24.1) | 8.0 (3.4-21.9) | 0.40 |
| IL-13 | 2.4 (1.0-15.3) | 2.9 (0.9-13.2) | 0.57 |
| IL-4 | 14.7 (4.0-52.8) | 16.9 (6.2-44.5) | 0.79 |
| IL-5 | 2.0 (0.7-5.2) | 1.7 (0.6-15.8) | 0.19 |
| MMP-9 | 109,000 (17000-378000) | 56,400 (30800-245000) | 0.08 |
| TRAIL | 23.8 (1.3-71.7) | 23.9 (1.3-76.6) | 0.91 |
| Fractalkine\* | 115 (18.1-215) | 82.5 (38.6-178) | 0.02 |
| MIP-1α\* | 10.2 (5.3-259) | 7.8 (4.0-64.6) | 0.02 |
| MIP-3α\* | 16.9 (10.7-47.6) | 14.8 (8.3-33.1) | 0.04 |
| IP-10 | 292 (103-1330) | 241 (113-494) | 0.16 |
| MCP-1 | 172 (19.6-364) | 164(60.7-521) | 0.37 |
| MDC | 929(596-2920) | 884 (436-2920) | 0.56 |
| MIP-1β\* | 18.7 (25.5-826) | 12.3 (19.5-497) | 0.01 |
| HCC-1 | 1970 (1250-4080) | 1760 (1140-2980) | 0.24 |
| MIP-3β\* | 114 (56.3-311) | 77.1 (44.4-744) | 0.003 |
| MIG\* | 952 (343-2780) | 539 (176-2210) | 0.002 |
| Lymphotactin | 97.2 (67.3-1380) | 106 (41.3-308) | 0.41 |
| 6CKINE | 534 (123-1330) | 398(175-996) | 0.08 |
| BCA-1\* | 15.4 (5.1-36.4) | 20.2 (7.7-74.9) | 0.008 |
| CTACK | 777 (366-1450) | 781 (320-1350) | 0.59 |
| Eotaxin-2 | 306 (43.3-697) | 247 (24.9-1100) | 0.89 |
| SDF-1α+β\* | 244 (243-4410) | 3910 (244-8590) | 0.001 |
| Fibrinogen\* | 1,560,000(566,000-3,900,000) | 1,270,000 (913,000-2,580,000) | 0.03 |
| vWF\* | 14,700 (3,770-55,100) | 6,140 (2620-31,200) | 0.00001 |
| GM-CSF | 19.1 (3.3-236) | 22 (2.9-1240) | 0.99 |
| FGF-2 | 156 (55.9-823) | 116 (56.4-924) | 0.12 |
| TGF-α\* | 8.9 (2.2-47.7) | 4.5 (1.2-263) | 0.001 |
| VEGF | 630 (266-5400) | 521 (234-5320) | 0.45 |
| IFN-γ | 9.9 (1.6-23.1) | 10.2 (1.8-19.9) | 0.66 |
| IL-12p70\* | 2.6 (0.9-5.0) | 1.9 (0.9-4.4) | 0.04 |
| IL-1β\* | 3.9 (0.7-25.5) | 2.3 (0.9-5.9) | 0.002 |
| IL-2 | 2.8 (0.6-5.4) | 2.5 (0.6-15.8) | 0.88 |
| IL-21\* | 2.6 (1-6.5) | 1.5 (0.5-3.5) | 0.003 |
| IL-23 | 103 (26.9-289) | 69.1 (24.2-319) | 0.07 |
| IL-6\* | 2.1 (0.6-4.4) | 1.1 (0.6-3.9) | 0.004 |
| IL-7 | 5.7 (2.5-11) | 5.0 (2.9-11.9) | 0.21 |
| IL-8\* | 3.8 (1.7-90.9) | 2.4 (0.9-7.8) | 0.001 |
| TNF-α\* | 6.1 (4.1-12) | 3.9 (2.1-5.8) | <0.0005 |
| IFN-α2 | 89.1 (10.1-2460) | 64.5 (25.9-214) | 0.16 |
| IL-15 | 5.5 (0.7-38.9) | 3.0 (0.7-49.5) | 0.41 |
| IL-17A | 7.8 (4.8-612.1) | 6.0 (4.2-546.3) | 0.25 |
| ITAC\* | 309(26.1-1130) | 53.0 (19.2-278) | 0.00001 |
| MIP-1δ | 1800 (1080-6140) | 1680 (296-4140) | 0.89 |
| MPO\* | 132 (19.7-393) | 38.4 (16.2-101) | <0.0005 |
| sICAM\* | 588 (56.4-1390) | 168 (71-979) | 0.0001 |
| sVCAM\* | 572 (323-1210) | 499 (331-794) | 0.01 |
| Adipsin | 4190 (850-12300) | 4190 (850-9810) | 0.81 |
| AGP\* | 1,730,000 (929000-2360000) | 1,230,000 (825000-1940000) | 0.001 |
| CRP\* | 124000 (1630-98200) | 2,270 (353-29100) | 0.00001 |
| Fetuin | 133000 (73000-188000) | 123000 (90000-192000) | 0.70 |
| L-Selectin\* | 621 (322-988) | 723 (465-1040) | 0.01 |
| PF4/CXCL4 | 5510 (1080-12200) | 4520 (1450-14200) | 0.18 |
| SAP\* | 5250 (2380-9120) | 6520 (3190-8420) | 0.036 |

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