

Factors determining the occurrence of submicroscopic malaria infections and their relevance for control

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Supplementary Table S1. 106 included PCR and slide-prevalence surveys: data and references

| Author (publication year), reference | Country | Location | Year data collected | Number tested by PCR | Number positive by PCR | Number tested by microscopy | Number positive by microscopy | PCR method | Microscopy method* | | Age group | Included in previous JID 2009 systematic review, DOI: 10.1086/644781? |
|--|--------------|-------------|------------------------|----------------------------|------------------------------|--------------------------------|----------------------------------|---------------|--------------------|--------------|-------------------|---|
| | | | | | | | | | N fields | N leucocytes | | |
| Vafa (2007) ⁶¹ | Mali | Mopti | 2001 | 212 | 85 | 212 | 34 | nested | - | 300 | children & adults | yes |
| Vafa (2007) ⁶¹ | Mali | Mopti | 2001 | 214 | 66 | 214 | 32 | nested | - | 300 | children & adults | yes |
| Roper (1996) ⁶² | Sudan | Daraweesh | 1993 | 79 | 10 | 79 | 2 | nested | 200 | - | children & adults | yes |
| Roper (1996) ⁶² | Sudan | Daraweesh | 1994 | 79 | 15 | 79 | 4 | nested | 200 | - | children & adults | yes |
| Roper (1996) ⁶² | Sudan | Daraweesh | 1994 | 79 | 19 | 79 | 8 | nested | 200 | - | children & adults | yes |
| Roper (1996) ⁶² | Sudan | Daraweesh | 1994 | 73 | 14 | 73 | 0 | nested | 200 | - | children & adults | yes |
| John (2005) ⁶³ | Kenya | Kipsamoite | 1999 | 123 | 13 | 123 | 10 | nested | - | 200 | children & adults | yes |
| John (2005) ⁶³ | Kenya | Kipsamoite | 2000 | 267 | 25 | 267 | 17 | nested | - | 200 | children & adults | yes |
| John (2005) ⁶³ | Kenya | Kipsamoite | 2000 | 273 | 16 | 273 | 8 | nested | - | 200 | children & adults | yes |
| John (2005) ⁶³ | Kenya | Kipsamoite | 2001 | 152 | 9 | 152 | 2 | nested | - | 200 | children & adults | yes |
| John (2005) ⁶³ | Kenya | Kipsamoite | 2002 | 228 | 33 | 228 | 18 | nested | - | 200 | children & adults | yes |
| Ofulla (2005) ⁶⁴ | Kenya | Kanyawegi | | 301 | 251 | 301 | 220 | nested | - | 200 | children & adults | yes |
| Stich (2006) ⁶⁵ | Burkina Faso | Bourasso | 2000 | 201 | 185 | 201 | 162 | nested | - | - | children & adults | yes |
| Alves (2002) ⁶⁶ | Brazil | Portuchuelo | 1998 | 164 | 16 | 175 | 4 | nested | 200 | - | children & adults | yes |
| Alves (2002) ⁶⁶ | Brazil | Portuchuelo | 1999 | 142 | 25 | 142 | 2 | nested | 200 | - | children & adults | yes |

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|--|---------------------------|---------------------|------------------------|----------------------------|------------------------------|--------------------------------|----------------------------------|---------------|--------------------|--------------|-------------------|---|
| | | | | | | | | | N fields | N leucocytes | | |
| Alves (2002) ⁶⁶ | Brazil | Portuchuelo | 1999 | 125 | 2 | 125 | 0 | nested | 200 | - | children & adults | yes |
| Alves (2002) ⁶⁶ | Brazil | Ji-Paraná | 2000 | 128 | 58 | 172 | 10 | nested | 200 | - | children & adults | yes |
| Muller (2001) ⁶⁷ | Sao Tome & Principe | Riboque | 1998 | 491 | 321 | 491 | 194 | nested | - | 200 | children & adults | yes |
| Alves (2006) ⁶⁸ | Republic of Cabo Verde | Santiago Island | 1998-2000 | 338 | 3 | 338 | 0 | nested | - | 500 | children & adults | yes |
| Alves (2006) ⁶⁸ | Republic of Cabo Verde | Santiago Island | 2003 | 261 | 10 | 261 | 0 | nested | - | 500 | children & adults | yes |
| Cortes (2004) ⁶⁹ | Papua New Guinea | Wosera | 2000 | 628 | 330 | 628 | 175 | nested | - | - | children & adults | yes |
| Roshanravan (2003) ⁷⁰ | Peru | Iquitos | 1999 | 819 | 28 | 819 | 12 | nested | 100 | - | children & adults | yes |
| Zwetyenga (1998) ⁷¹ | Senegal | Ndiop | 1994 | 143 | 110 | 143 | 52 | nested | 200 | - | children & adults | yes |
| Toma (2001) ⁷² | Lao PDR | Phavang | | 143 | 77 | 143 | 46 | nested | 100 | - | children & adults | yes |
| Toma (2001) ⁷² | Lao PDR | Sisomsouen | | 193 | 20 | 193 | 7 | nested | 100 | - | children & adults | yes |
| Mehlotra (2002) ⁷³ | Papua New Guinea | Wosera | 1998-1999 | 340 | 179 | 1759 | 352 | nested | - | 200 | children & adults | yes |
| Mehlotra (2002) ⁷³ | Papua New Guinea | Liksul | 2000 | 330 | 195 | 972 | 217 | nested | - | 200 | children & adults | yes |
| Owusu-Agyei (2002) ⁷⁴ | Ghana | Kassena- Nankana | 2000 | 308 | 252 | 308 | 217 | nested | 200 | - | children & adults | yes |
| Felger (1995) ⁷⁵ | Papua New Guinea | East Sepik | 1992 | 304 | 144 | 304 | 75 | nested | 100 | - | children & adults | yes |
| Snounou (1993) ⁷⁶ | Guinea Bissau | Bor | 1992 | 110 | 90 | 110 | 28 | nested | - | 200 | children & adults | yes |
| Snounou (1993) ⁷⁶ | Guinea Bissau | Bor | 1992 | 79 | 69 | 79 | 38 | nested | - | 200 | children & adults | yes |
| Ntoumi (1995) ⁷⁷ | Senegal | Dielmo | 1992 | 65 | 50 | 65 | 50 | nested | 300 | - | children & adults | yes |

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|--|----------------------|-------------------|------------------------|----------------------------|------------------------------|--------------------------------|----------------------------------|-----------------|--------------------|--------------|-------------------|---|
| | | | | | | | | | N fields | N leucocytes | | |
| Marques (2005) ⁷⁸ | Mozambique | Manchiana | 2001 | 70 | 50 | 70 | 43 | nested | - | 500 | children & adults | yes |
| Marques (2005) ⁷⁸ | Mozambique | Manchiana | 2002 | 70 | 55 | 70 | 43 | nested | - | 500 | children & adults | yes |
| Marques (2005) ⁷⁸ | Mozambique | Ilha Josina | 2001 | 81 | 73 | 81 | 53 | nested | - | 500 | children & adults | yes |
| Marques (2005) ⁷⁸ | Mozambique | Ilha Josina | 2002 | 87 | 79 | 87 | 66 | nested | - | 500 | children & adults | yes |
| Khaminsou (2008) ⁷⁹ | Lao PDR | Houy Jang | 2006 | 130 | 18 | 130 | 12 | semi- nested | 100 | - | children & adults | yes |
| Khaminsou (2008) ⁷⁹ | Lao PDR | Keng Thong | 2006 | 130 | 32 | 130 | 22 | semi- nested | 100 | - | children & adults | yes |
| Nsobya (2004) ⁸⁰ | Uganda | Kampala | 2000 | 316 | 114 | 316 | 55 | nested | 100 | - | children only | yes |
| Touré (2006) ⁸¹ | Gabon | Dienga | | 278 | 58 | 278 | 20 | nested | - | - | adults only | yes |
| Guerra-Neira (2006) ⁸² | Equatorial Guinea | Sacriba | 1998 | 36 | 24 | 36 | 18 | semi- nested | - | - | children only | yes |
| Guerra-Neira (2006) ⁸² | Equatorial Guinea | Bareso | 1998 | 35 | 22 | 35 | 14 | semi- nested | - | - | children only | yes |
| Guerra-Neira (2006) ⁸² | Equatorial Guinea | Ureka | 1998 | 81 | 50 | 81 | 40 | semi- nested | - | - | children only | yes |
| Silue (2006) ⁸³ | Cote d'Ivoire | Taabo | 2001 | 424 | 356 | 424 | 232 | nested | - | 200 | children only | yes |
| Kobbe (2006) ⁸⁴ | Ghana | Afigya Sekyere | 2003 | 962 | 175 | 1069 | 158 | nested | 200 | - | children only | yes |
| Paganotti (2006) ⁸⁵ | Burkina Faso | Bassy & Zanga | 2002 | 92 | 89 | 92 | 76 | nested | 200 | - | children only | yes |
| Paganotti (2006) ⁸⁵ | Burkina Faso | Bassy & Zanga | 2002 | 58 | 56 | 58 | 51 | nested | 200 | - | children only | yes |
| Mayor (2003) ⁸⁶ | Mozambique | Manhica | 1999 | 178 | 76 | 249 | 34 | nested | - | - | adults only | yes |
| Mayor (2003) ⁸⁶ | Mozambique | Manhica | 1997 | 310 | 135 | 625 | 154 | nested | - | - | children only | yes |

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|--|---------------------|-------------------|------------------------|----------------------------|------------------------------|--------------------------------|----------------------------------|---------------|--------------------|--------------|-------------------|---|
| | | | | | | | | | N fields | N leucocytes | | |
| Vafa (2008) ⁸⁷ | Senegal | Niakhar | 2002 | 372 | 164 | 372 | 130 | nested | 200 | - | children only | yes |
| Vafa (2008) ⁸⁷ | Senegal | Niakhar | 2003 | 372 | 190 | 372 | 130 | nested | 200 | - | children only | yes |
| Wataya (1993) ⁸⁸ | Solomon Islands | Guadalcanal | 1991 | 98 | 8 | 98 | 8 | nested | 1000 | - | children & adults | yes |
| Dal-Bianco (2007) ⁸⁹ | Gabon | Lambarene | 2005-2006 | 470 | 244 | 493 | 57 | nested | 100 | - | adults only | yes |
| Peyerl-Hoffman (2001) ⁹⁰ | Uganda | Kabarole | 1997-1998 | 406 | 225 | 406 | 140 | nested | 100 | - | children & adults | yes |
| Cerutti (2007) ⁹¹ | Brazil | Espírito Santo | 2002-2003 | 1527 | 10 | 1777 | 0 | nested | 100 | - | children & adults | yes |
| Dent (2007) ⁹² | Kenya | Kanyawegi | 2003 | 201 | 141 | 201 | 117 | PCR-LDR | - | - | children & adults | yes |
| Mueller (2009) ⁹³ | Papua New Guinea | Jama | 2005 | 203 | 71 | 203 | 45 | PCR-LDR | 100 | - | children & adults | no |
| Mueller (2009) ⁹³ | Papua New Guinea | Sengo | 2005 | 153 | 76 | 153 | 45 | PCR-LDR | 100 | - | children & adults | no |
| Mueller (2009) ⁹³ | Papua New Guinea | Mewi | 2005 | 133 | 65 | 133 | 41 | PCR-LDR | 100 | - | children & adults | no |
| Mueller (2009) ⁹³ | Papua New Guinea | Wapins | 2005 | 145 | 72 | 145 | 31 | PCR-LDR | 100 | - | children & adults | no |
| Mueller (2009) ⁹³ | Papua New Guinea | Bangeleko | 2005 | 172 | 101 | 172 | 58 | PCR-LDR | 100 | - | children & adults | no |
| Mueller (2009) ⁹³ | Papua New Guinea | Wombisa | 2005 | 174 | 91 | 174 | 57 | PCR-LDR | 100 | - | children & adults | no |
| Mueller (2009) ⁹³ | Papua New Guinea | Malba 1 | 2005 | 163 | 82 | 163 | 38 | PCR-LDR | 100 | - | children & adults | no |
| Mueller (2009) ⁹³ | Papua New Guinea | Malba 2 | 2005 | 174 | 102 | 174 | 49 | PCR-LDR | 100 | - | children & adults | no |
| Mueller (2009) ⁹³ | Papua New Guinea | Yeniko | 2005 | 184 | 88 | 184 | 61 | PCR-LDR | 100 | - | children & adults | no |
| Mueller (2009) ⁹³ | Papua New Guinea | Urita | 2005 | 166 | 101 | 166 | 48 | PCR-LDR | 100 | - | children & adults | no |

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|--|---------------------|-------------|------------------------|----------------------------|------------------------------|--------------------------------|----------------------------------|---------------|--------------------|--------------|-------------------|---|
| | | | | | | | | | N fields | N leucocytes | | |
| Mueller (2009) ⁹³ | Papua New Guinea | Bonohoi | 2005 | 174 | 95 | 174 | 57 | PCR-LDR | 100 | - | children & adults | no |
| Mueller (2009) ⁹³ | Papua New Guinea | Wagarom | 2005 | 175 | 117 | 175 | 75 | PCR-LDR | 100 | - | children & adults | no |
| Mueller (2009) ⁹³ | Papua New Guinea | Sunuhu | 2005 | 188 | 148 | 188 | 85 | PCR-LDR | 100 | - | children & adults | no |
| Mueller (2009) ⁹³ | Papua New Guinea | Ilaita 3 | 2005 | 148 | 83 | 148 | 23 | PCR-LDR | 100 | - | children & adults | no |
| Mueller (2009) ⁹³ | Papua New Guinea | Ilaita 4 | 2005 | 175 | 95 | 175 | 43 | PCR-LDR | 100 | - | children & adults | no |
| Ladeia-Andrade (2009) ⁹⁴ | Brazil | Unini river | 2002 | 233 | 8 | 275 | 4 | nested | 100 | - | children & adults | no |
| Ladeia-Andrade (2009) ⁹⁴ | Brazil | Unini river | 2002 | 277 | 20 | 286 | 2 | nested | 100 | - | children & adults | no |
| Ladeia-Andrade (2009) ⁹⁴ | Brazil | Jau river | 2002 | 47 | 5 | 47 | 1 | nested | 100 | - | children & adults | No |
| Ladeia-Andrade (2009) ⁹⁴ | Brazil | Unini river | 2003 | 320 | 11 | 321 | 4 | nested | 100 | - | children & adults | no |
| Ladeia-Andrade (2009) ⁹⁴ | Brazil | Jau river | 2003 | 165 | 1 | 166 | 0 | nested | 100 | - | children & adults | no |
| Rosanas-Urgell (2010) ⁹⁵ | Papua New Guinea | Ilahita | 2008 | 452 | 198 | 452 | 115 | nested | 200 | - | children only | no |
| Satoguina (2009) ⁹⁶ | Gambia | Basse | 2008 | 841 | 219 | 934 | 97 | nested | 100 | - | children & adults | no |
| Satoguina (2009) ⁹⁶ | Gambia | Farafenni | 2008 | 689 | 185 | 729 | 82 | nested | 100 | - | children & adults | no |
| Satoguina (2009) ⁹⁶ | Guinea Bissau | Caio | 2008 | 818 | 194 | 834 | 33 | nested | 100 | - | children & adults | no |
| Lin (2010) ⁹⁷ | Papua New Guinea | Ilaita | 2006 | 264 | 131 | 264 | 86 | PCR-LDR | 100 | - | children only | no |
| Steenkeste (2010) ⁹⁸ | Cambodia | Yasom | 2001 | 204 | 136 | 204 | 75 | nested | 100 | - | children & adults | no |

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|--|---------------------|-----------------|------------------------|----------------------------|------------------------------|--------------------------------|----------------------------------|---------------|--------------------|--------------|-------------------|---|
| | | | | | | | | | N fields | N leucocytes | | |
| Steenkeste (2010) ⁹⁸ | Cambodia | Paor | 2001 | 209 | 126 | 209 | 48 | nested | 100 | - | children & adults | no |
| Steenkeste (2010) ⁹⁸ | Cambodia | Chet | 2001 | 202 | 119 | 202 | 53 | nested | 100 | - | children & adults | no |
| Steenkeste (2010) ⁹⁸ | Cambodia | Tung | 2001 | 141 | 55 | 141 | 20 | nested | 100 | - | children & adults | no |
| Steenkeste (2010) ⁹⁸ | Cambodia | Touch | 2001 | 143 | 88 | 143 | 49 | nested | 100 | - | children & adults | no |
| Steenkeste (2010) ⁹⁸ | Cambodia | Laing Av | 2001 | 118 | 80 | 118 | 31 | nested | 100 | - | children & adults | no |
| Steenkeste (2010) ⁹⁸ | Cambodia | Pahoy | 2001 | 134 | 87 | 134 | 38 | nested | 100 | - | children & adults | no |
| Katsuragawa (2010) ⁹⁹ | Brazil | Porto Velho | | 205 | 4 | 205 | 1 | nested | 100 | - | children & adults | no |
| da Silva (2010) ¹⁰⁰ | Brazil | Granada | 2004 | 386 | 35 | 388 | 6 | nested | 100 | - | children & adults | no |
| da Silva (2010) ¹⁰⁰ | Brazil | Granada | 2004 | 379 | 33 | 378 | 6 | nested | 100 | - | children & adults | no |
| da Silva (2010) ¹⁰⁰ | Brazil | Granada | 2005 | 328 | 22 | 329 | 0 | nested | 100 | - | children & adults | no |
| da Silva (2010) ¹⁰⁰ | Brazil | Granada | 2006 | 334 | 8 | 351 | 1 | nested | 100 | - | children & adults | no |
| Marfurt (2010) ¹⁰¹ | Papua New Guinea | Karimui | 2003 | 263 | 102 | 258 | 34 | nested | - | - | children & adults | no |
| Marfurt (2010) ¹⁰¹ | Papua New Guinea | Karimui | 2004 | 347 | 71 | 346 | 64 | nested | - | - | children & adults | no |
| Marfurt (2010) ¹⁰¹ | Papua New Guinea | Karimui | 2005 | 359 | 131 | 358 | 82 | nested | - | - | children & adults | no |
| Marfurt (2010) ¹⁰¹ | Papua New Guinea | South Wosera | 2003 | 317 | 129 | 314 | 55 | nested | - | - | children & adults | no |
| Marfurt (2010) ¹⁰¹ | Papua New Guinea | South Wosera | 2004 | 366 | 147 | 356 | 96 | nested | - | - | children & adults | no |

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|---|----------|------------------|------------------------|----------------------------|------------------------------|--------------------------------|----------------------------------|-----------------|--------------------|--------------|-------------------|---|
| | | | | | | | | | N fields | N leucocytes | | |
| Pacific Malaria Initiative Survey Group (2010) ¹⁰² | Vanuatu | Erromango | 2008 | 413 | 2 | 413 | 0 | nested | 100 | - | children only | no |
| Liljander (2011) ¹⁰³ | Kenya | Junju | 2005 | 337 | 263 | 337 | 243 | nested | - | - | children only | no |
| Liljander (2011) ¹⁰³ | Kenya | Junju | 2005 | 360 | 212 | 360 | 174 | nested | - | - | children only | no |
| Gahutu (2011) ¹⁰⁴ | Rwanda | Huye | 2010 | 545 | 92 | 545 | 61 | semi- nested | - | - | children only | no |
| Steenkeste (2009) ¹⁰⁵ | Cambodia | Ping | 2001 | 102 | 73 | 102 | 59 | nested | - | - | children & adults | no |
| Steenkeste (2009) ¹⁰⁵ | Cambodia | Smach & Pahoy | 2001 | 235 | 142 | 235 | 77 | nested | - | - | children & adults | no |

* Microscopy method: number of fields or number of leucocytes examined before declaring a slide parasite-negative.

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