



# Supplementary Materials: Molecular Characterization and Genetic Diversity of Haplogroup E Human Lice in Guinea, West Africa

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**Table S1.** Table representing details about lice collected in Rural Maferenya and Urban Kindia, Guinea.

| Host              | Host Age | Nb of Lice | ID      | Sex | Stage | Tube ID |
|-------------------|----------|------------|---------|-----|-------|---------|
| <b>Maferinyah</b> |          |            |         |     |       |         |
| 1                 | 6        | 3          | PGM1-1  | M   | A     | 1       |
|                   |          |            | PGM1-2  | F   | A     | 2       |
|                   |          |            | PGM1-3  | F   | A     | 3       |
| 2                 | 9        | 1          | PGM2-1  | -   | L3    | 4       |
| 3                 | 8        | 3          | PGM3-1  | M   | A     | 5       |
|                   |          |            | PGM3-2  | -   | L3    | 6       |
|                   |          |            | PGM3-3  | M   | A     | 7       |
| 4                 | 8        | 3          | PGM4-1  | F   | A     | 8       |
|                   |          |            | PGM4-2  | -   | L3    | 9       |
|                   |          |            | PGM4-3  | -   | L2    | 10      |
| 5                 | 2        | 6          | PGM5-1  | -   | L2    | 11      |
|                   |          |            | PGM5-2  | -   | L2    | 12      |
|                   |          |            | PGM5-3  | M   | A     | 13      |
|                   |          |            | PGM5-4  | M   | A     | 14      |
|                   |          |            | PGM5-5  | -   | L3    | 15      |
|                   |          |            | PGM5-6  | F   | A     | 16      |
| 6                 | 5        | 2          | PGM6-1  | -   | L3    | 17      |
|                   |          |            | PGM6-2  | -   | L3    | 18      |
| 7                 | 6        | 4          | PGM7-1  | F   | A     | 19      |
|                   |          |            | PGM7-2  | M   | A     | 20      |
|                   |          |            | PGM7-3  | F   | A     | 21      |
|                   |          |            | PGM7-4  | F   | A     | 22      |
| 8                 | 7        | 1          | PGM8-1  | M   | A     | 23      |
| 9                 | 34       | 5          | PGM9-1  | M   | A     | 24      |
|                   |          |            | PGM9-2  | M   | A     | 25      |
|                   |          |            | PGM9-3  | -   | L2    | 26      |
|                   |          |            | PGM9-4  | -   | L3    | 27      |
|                   |          |            | PGM9-5  | -   | L3    | 28      |
| 10                | 8        | 1          | PGM10-1 | -   | L3    | 29      |
| 11                | 9        | 5          | PGM11-1 | -   | L2    | 30      |
|                   |          |            | PGM11-2 | -   | L3    | 31      |
|                   |          |            | PGM11-3 | -   | L3    | 32      |
|                   |          |            | PGM11-4 | -   | L3    | 33      |
|                   |          |            | PGM11-5 | -   | L3    | 34      |
| 12                | 11       | 4          | PGM12-1 | F   | A     | 35      |
|                   |          |            | PGM12-2 | F   | A     | 36      |
|                   |          |            | PGM12-3 | M   | A     | 37      |
|                   |          |            | PGM12-4 | -   | L2    | 38      |
| 13                | 4        | 3          | PGM13-1 | F   | A     | 39      |
|                   |          |            | PGM13-2 | -   | L3    | 40      |
|                   |          |            | PGM13-3 | -   | L3    | 41      |
| 14                | 3        | 6          | PGM14-1 | -   | L2    | 42      |
|                   |          |            | PGM14-2 | -   | L3    | 43      |

|    |    |    |          |   |    |     |
|----|----|----|----------|---|----|-----|
|    |    |    | PGM14-3  | - | L3 | 44  |
|    |    |    | PGM14-4  | - | L3 | 45  |
|    |    |    | PGM14-5  | - | L3 | 46  |
|    |    |    | PGM14-6  | - | L3 | 47  |
| 15 | 6  | 6  | PGM15-1  | F | A  | 48  |
|    |    |    | PGM15-2  | F | A  | 49  |
|    |    |    | PGM15-3  | F | A  | 50  |
|    |    |    | PGM15-4  | M | A  | 51  |
|    |    |    | PGM15-5  | - | L3 | 52  |
|    |    |    | PGM15-6  | - | L2 | 53  |
| 16 | 7  | 10 | PGM16-1  | - | L1 | 54  |
|    |    |    | PGM16-2  | F | A  | 55  |
|    |    |    | PGM16-3  | M | A  | 56  |
|    |    |    | PGM16-4  | M | A  | 57  |
|    |    |    | PGM16-5  | M | A  | 58  |
|    |    |    | PGM16-6  | M | A  | 59  |
|    |    |    | PGM16-7  | - | L3 | 60  |
|    |    |    | PGM16-8  | - | L3 | 61  |
|    |    |    | PGM16-9  | - | L3 | 62  |
|    |    |    | PGM16-10 | - | L3 | 63  |
| 17 | 35 | 3  | PGM17-1  | - | L2 | 64  |
|    |    |    | PGM17-2  | - | L2 | 65  |
|    |    |    | PGM17-3  | - | L3 | 66  |
| 18 | 28 | 1  | PGM18-1  | F | A  | 67  |
| 19 | 6  | 4  | PGM19-1  | F | A  | 68  |
|    |    |    | PGM19-2  | - | L3 | 69  |
|    |    |    | PGM19-3  | - | L2 | 70  |
|    |    |    | PGM19-4  | - | L2 | 71  |
| 20 | 12 | 1  | PGM20-1  | - | L3 | 72  |
| 21 | 9  | 4  | PGM21-1  | F | A  | 73  |
|    |    |    | PGM21-2  | F | A  | 74  |
|    |    |    | PGM21-4  | F | A  | 75  |
| 22 | 22 | 5  | PGM22-1  | F | A  | 76  |
|    |    |    | PGM22-2  | F | A  | 77  |
|    |    |    | PGM22-3  | - | L3 | 78  |
|    |    |    | PGM22-4  | - | L3 | 79  |
|    |    |    | PGM22-5  | - | L2 | 80  |
| 23 | 8  | 4  | PGM23-1  | F | A  | 81  |
|    |    |    | PGM23-2  | F | A  | 82  |
|    |    |    | PGM23-3  | F | A  | 83  |
|    |    |    | PGM23-4  | M | A  | 84  |
| 24 | 9  | 13 | PGM24-1  | M | A  | 85  |
|    |    |    | PGM24-2  | M | A  | 86  |
|    |    |    | PGM24-3  | - | L2 | 87  |
|    |    |    | PGM24-4  | - | L2 | 88  |
|    |    |    | PGM24-5  | - | L2 | 89  |
|    |    |    | PGM24-6  | - | L2 | 90  |
|    |    |    | PGM24-7  | - | L3 | 91  |
|    |    |    | PGM24-8  | - | L3 | 92  |
|    |    |    | PGM24-9  | - | L3 | 93  |
|    |    |    | PGM24-10 | - | L3 | 94  |
|    |    |    | PGM24-11 | - | L3 | 95  |
|    |    |    | PGM24-12 | - | L3 | 96  |
|    |    |    | PGM24-13 | - | L3 | 97  |
| 25 | 4  | 3  | PGM25-1  | F | A  | 98  |
|    |    |    | PGM25-2  | F | A  | 99  |
|    |    |    | PGM25-3  | - | L3 | 100 |
| 26 | 6  | 1  | PGM26-1  | M | A  | 101 |

|        |      |    |          |   |    |     |
|--------|------|----|----------|---|----|-----|
| 27     | 8    | 1  | PGM27-1  | F | A  | 102 |
| 28     | 9    | 2  | PGM28-1  | F | A  | 103 |
|        |      |    | PGM28-2  | - | L3 | 104 |
| 29     | 12   | 3  | PGM29-1  | - | L3 | 105 |
|        |      |    | PGM29-2  | - | L3 | 106 |
|        |      |    | PGM29-3  | - | L3 | 107 |
| 30     | 7    | 1  | PGM30-1  | M | A  | 108 |
| 31     | 4    | 1  | PGM31-1  | F | A  | 109 |
| 32     | 3    | 3  | PGM32-1  | F | A  | 110 |
|        |      |    | PGM32-2  | F | A  | 111 |
|        |      |    | PGM32-3  | F | A  | 112 |
| 33     | 10   | 3  | PGM33-1  | F | A  | 113 |
|        |      |    | PGM33-2  | F | A  | 114 |
|        |      |    | PGM33-3  | F | A  | 115 |
| 34     | 10   | 2  | PGM34-1  | F | A  | 116 |
|        |      |    | PGM34-2  | - | L3 | 117 |
| 35     | 9    | 3  | PGM35-1  | F | A  | 118 |
|        |      |    | PGM35-2  | M | A  | 119 |
|        |      |    | PGM35-3  | - | L3 | 120 |
| 36     | 8    | 4  | PGM36-1  | - | L3 | 121 |
|        |      |    | PGM36-2  | - | L2 | 122 |
|        |      |    | PGM36-3  | - | L1 | 123 |
|        |      |    | PGM36-4  | - | L1 | 124 |
| 37     | 17   | 3  | PGM37-1  | F | A  | 125 |
|        |      |    | PGM37-2  | F | A  | 126 |
|        |      |    | PGM37-3  | M | A  | 127 |
| 38     | 13   | 3  | PGM38-1  | F | A  | 128 |
|        |      |    | PGM38-2  | F | A  | 129 |
|        |      |    | PGM38-3  | F | A  | 130 |
| Kindia |      |    |          |   |    |     |
| 1      | 8    | 1  | PGK1-1   | F | A  | 131 |
| 2      | M-30 | 1  | PGK2-1   | - | L3 | 132 |
| 3      | M-6  | 2  | PGK3-1   | M | A  | 133 |
|        |      |    | PGK3-2   | - | L2 | 134 |
| 4      | 7    | 1  | PGK4-1   | - | L3 | 135 |
| 5      | 10   | 1  | PGK5-1   | M | A  | 136 |
| 6      | 8    | 1  | PGK6-1   | M | A  | 137 |
| 7      | 11   | 1  | PGK7-1   | - | L3 | 138 |
| 8      | 62   | 1  | PGK8-1   | F | A  | 139 |
| 9      | 6    | 1  | PGK9-1   | F | A  | 140 |
| 10     | 22   | 4  | PGK10-1  | - | L3 | 141 |
|        |      |    | PGK10-2  | M | A  | 142 |
|        |      |    | PGK10-3  | - | L3 | 143 |
|        |      |    | PGK10-4  | F | A  | 144 |
| 11     | 9    | 11 | PGK11-1  | F | A  | 145 |
|        |      |    | PGK11-2  | F | A  | 146 |
|        |      |    | PGK11-3  | - | L3 | 147 |
|        |      |    | PGK11-4  | M | A  | 148 |
|        |      |    | PGK11-5  | M | A  | 149 |
|        |      |    | PGK11-6  | F | A  | 150 |
|        |      |    | PGK11-7  | M | A  | 151 |
|        |      |    | PGK11-8  | F | A  | 152 |
|        |      |    | PGK11-9  | M | A  | 153 |
|        |      |    | PGK11-10 | F | A  | 154 |
|        |      |    | PGK11-11 | - | L3 | 155 |

**Table S2.** Geographical and frequencies occurrences of *cytb* haplotypes of human head and body lice worldwide.

[illegible]

|                                                                                                                                                                                           |                                                                                                                                                          |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Acinetobacter nosocomialis</i> P.h.capitis - Maferinyah<br><i>Acinetobacter nosocomialis</i> strain SSA3 [CP020588.1]<br><i>Acinetobacter nosocomialis</i> P.h.capitis - Maferinyah(2) |                                                                                                                                                          |
| <i>Acinetobacter variabilis</i> P.h.capitis - Maferinyah<br><i>Acinetobacter variabilis</i> P.h.capitis - Maferinyah(2)<br><i>Acinetobacter variabilis</i> strain ANC 4771 [KM821044.1]   | CGACCCGCCATCTTATCACCAGGCTGGATACGACGTTTAAACGGCCAGGTAAACCTTAAACAACTTTCAATACGCCAGTTGTCAGTTCGTCACCTGTA<br>.....<br>.....                                     |
| <i>Acinetobacter haemolyticus</i> P.h.capitis - Maferinyah<br><i>Acinetobacter haemolyticus</i> strain 11616 [CP032002.1]                                                                 | CGACCCGCCATCTTATCACCAGGCTGAATACGACGCTTAAACGGCCAGGTAAACCTTAAACAACTTTAAATACACCCGTTGTTAATTCATCACCTGTA<br>.....<br>.....                                     |
| <i>Acinetobacter townneri</i> P.h.capitis - Maferinyah<br><i>Acinetobacter townneri</i> strain 205 [P048014.1]                                                                            | CGACCCGCCATCTTATCACCAGGCTGGATACGACGTTTAAACAGGTAAGTAAACCTTAAACAACTTTCAATACGCCAGTTGTTAATTCATCACCTGTA<br>.....G.....C.....G.....C.....A.....C.....<br>..... |
| <i>Acinetobacter</i> sp P.h.capitis - Maferinyah                                                                                                                                          |                                                                                                                                                          |
| CGACCCGCCATCTTATCACCAGGCTGGATACGACGTTTAAACAGGTAAGTAAACCTTAAACAACTTTCAATACGCCAGTTGTTAATTCATCACCTGTA                                                                                        |                                                                                                                                                          |
| 100 110 120 130 140 150 160 170 180 190                                                                                                                                                   |                                                                                                                                                          |
| <i>Acinetobacter nosocomialis</i> P.h.capitis - Maferinyah<br><i>Acinetobacter nosocomialis</i> strain SSA3 [CP020588.1]<br><i>Acinetobacter nosocomialis</i> P.h.capitis - Maferinyah(2) | GCAAGCTTACGTTTCTCTCAGCGAATTTCTCATCAATTTCTGCGCTCTTCTCTTCAAGAACCTTGAATTCGAGTTAAACGCTCAGCGATTGCTT<br>.....<br>.....                                         |
| <i>Acinetobacter variabilis</i> P.h.capitis - Maferinyah<br><i>Acinetobacter variabilis</i> P.h.capitis - Maferinyah(2)<br><i>Acinetobacter variabilis</i> strain ANC 4771 [KM821044.1]   | GAAAGTTTGGCTTTTCTCAGCAATTTCTCATCAATTTCAAGGCTCTTCTCTTTTAAAGAACCTTGAATTTGAGTTAAACGTTCAAGCAATTGCTT<br>.....<br>.....                                        |
| <i>Acinetobacter haemolyticus</i> P.h.capitis - Maferinyah<br><i>Acinetobacter haemolyticus</i> strain 11616 [CP032002.1]                                                                 | GAAAGCTTACGTTTCTCTCTGCAATTTCTCATCGATTTGCGATGCTCTTCTCTTCAAGAACCTTGAATTTGCGTTAAACGTTCAAGCAATTGCTT<br>.....<br>.....                                        |
| <i>Acinetobacter townneri</i> P.h.capitis - Maferinyah<br><i>Acinetobacter townneri</i> strain 205 [P048014.1]                                                                            | GAAAGCTTACGTTTCTCTCTGCGAATTTCTCATCAATTTCAAGGCTCTTCTCTTTTAAAGAACTTGAATTTGAGTTAAACGCTCAGCAATTGCTT<br>.....A.....A.....<br>.....                            |
| <i>Acinetobacter</i> sp P.h.capitis - Maferinyah                                                                                                                                          |                                                                                                                                                          |
| GAAAGTTTACGTTTCTCTCAGCAATTTCTCATCAATTTCAAGGCTCTTCTCTTTTAAAGAACCTTGAATTTGAGTTAAACGCTCAGCAATTGCTT                                                                                           |                                                                                                                                                          |
| 200 210 220 230 240 250 260 270 280                                                                                                                                                       |                                                                                                                                                          |
| <i>Acinetobacter nosocomialis</i> P.h.capitis - Maferinyah<br><i>Acinetobacter nosocomialis</i> strain SSA3 [CP020588.1]<br><i>Acinetobacter nosocomialis</i> P.h.capitis - Maferinyah(2) | CATCTGTGCGGTGGAATTTCAAGTAAATCAACAGGCTCTAAGCCAGACAAATAATCTTCAGAAAGTTTATCGCCACGTTTAGTTGAACCAACGCCA<br>.....<br>.....                                       |
| <i>Acinetobacter variabilis</i> P.h.capitis - Maferinyah<br><i>Acinetobacter variabilis</i> P.h.capitis - Maferinyah(2)<br><i>Acinetobacter variabilis</i> strain ANC 4771 [KM821044.1]   | CATCACTTGGTTGGATATCAAGCAGATCAACAGGCTCTAACCAGATTAACAACTTTTCAGACAGTTTGTACCCGCGTTTAGTAGTACCGCCACCG<br>.....<br>.....                                        |
| <i>Acinetobacter haemolyticus</i> P.h.capitis - Maferinyah<br><i>Acinetobacter haemolyticus</i> strain 11616 [CP032002.1]                                                                 | CATCAGCTGGTTGGATTTCAAGTAAATCAACAGGCTCTAACCAGATTAACAACTTTTCAGACAGTTTGTACCCGCGTTTAGTTAGTACCGCCACCA<br>.....C.....<br>.....                                 |
| <i>Acinetobacter townneri</i> P.h.capitis - Maferinyah<br><i>Acinetobacter townneri</i> strain 205 [P048014.1]                                                                            | CATCACTTGGTTGGATTTCAAGTAAATCAACAGGCTCTAACCAGATTAACAACTTTTCAGACAGTTTGTACCCGCGTTTAGTTAGTACCGCCACCG<br>.....A.....GA.....C.....C.....<br>.....              |
| <i>Acinetobacter</i> sp P.h.capitis - Maferinyah                                                                                                                                          |                                                                                                                                                          |
| CATCAGTGGTTGGATTTCAAGTAAATCAACAGGCTCTAACCAGATTAACAACTTTTCAGACAGTTTGTACCCGCGTTTAGTTAGTACCGCCACCG                                                                                           |                                                                                                                                                          |

**Figure S1.** Alignment of a 288-bp fragment of the *rpoB* gene of *Acinetobacter nosocomialis* strain SSA3 [CP020588.1], *Acinetobacter variabilis* strain ANC 4771 [KM821044.1], *Acinetobacter haemolyticus* strain 11616 [CP032002.1] and *Acinetobacter townneri* strain 205 [P048014.1] with the five *Acinetobacter* species described in this study using BioEdit software. Mutations of our potential new specie ‘*Acinetobacter* sp P.h.capitis – Maferinya’ regarding other *Acinetobacter* species are highlighted.