# Genome sequences of all *Chlamydia psittaci* genotype reference strains

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*Chlamydia psittaci* is a Gram-negative, obligate intracellular bacterium causing respiratory disease in birds but also in mammals. The infection is transmittable to humans causing pneumonia. Sequencing of the *C. psittaci* major outer membrane protein (*ompA*) gene identified 9 genotypes (A to F, E/B, M56, WC). Genotypes cluster with host species. For instance, genotype A is associated with *Psittaciformes* (cockatoos, parrots, parakeets, lories) while genotype B and D are associated with pigeons and turkeys, respectively. Genotypes A and D are more virulent for birds and humans compared to genotype B. The molecular mechanisms behind these biological differences are not understood.

We sequenced the genomes of all *C. psittaci* genotype reference strains (84/55; genotype A, CP3; genotype B, GR9; genotype C, NJ1; genotype D, MN; genotype E, VS225; genotype F, WS/RT/E30; genotype E/B, M56; genotype M56 and WC; genotype WC). Sequencing was performed using shotgun 454 Titanium (Roche) pyrosequencing according to the manufacturer's recommendations. *De novo* and reference mapping assemblies were performed with Newbler (version 2.3; 454 Life Sciences, Branford, CT). Identification of protein-coding genes and genome annotation has been done using the IGS prokaryotic annotation pipeline.

Table 1 is a summary of the features of the genomes. Comparative genomics analysis of these genomes will give us insight in the differences in pathogenicity, host tropism and tissue specificity.

**Table 1: The features of the genome sequences.**

| Genotype | Strain | Host | Length (bp) | Number of putative coding sequences | %GC | Plasmid Y/N |
|---|---|---|---|---|---|---|
| A | 84/55 | *Amazona sp.* | 1172064 | 1124 | 39 | Y |
| B | CP3 | *Columba livia*[a] | 1168150 | 1121 | 39 | Y |
| C | GR9 | *Anas platyrhynchos* | 1147152 | 1045 | 39.1 | N |
| D | NJ1 | *Meleagris gallapavo* | 1161434 | 1049 | 39 | Y |
| E | MN | *Homo sapiens* | 1168490 | 1040 | 39 | Y |
| F | VS225 | Parakeet | 1157385 | 1113 | 39 | Y |
| E/B | WS/RT/E30 | *Anas platyrhynchos* | 1140789 | 1048 | 39 | Y |
| M56 | M56 | *Ondatra zibethicus* | 1161385 | 1046 | 38.7 | Y |
| WC | WC | *Bos taurus* | 1172265 | 1050 | 39.1 | Y |

[a]Isolated from an urban pigeon