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Corrigendum: Evidence for the cytoplasmic localization of the L- α -Glycerophosphate oxidase in members of the "*Mycoplasma mycoides* cluster"

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A corrigendum on

Evidence for the cytoplasmic localization of the L- α -Glycerophosphate oxidase in members of the "*Mycoplasma mycoides* cluster"

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In the published article, there were several errors in [Table 1](#) as published. The host species from several *Mycoplasma feriruminatoris* was wrongly indicated as "Goat". *M. feriruminatoris* strain G5813/1+2 was isolated from a Rocky Mountain Goat, whereas the six other *M. feriruminatoris* strains were isolated from Alpine Ibex. In addition, the *Mycoplasma mycoides* subsp. *capri* strain D2082/91 is also referred as strain D2482/91 elsewhere and both names are now indicated. The year of isolation of the two *M. feriruminatoris* strains 14/OD_0492 and 14/OD_0535 was wrongly indicated as "1994" and is now updated to "2014". Finally, several references appearing in [Table 1](#) were wrongly stated as "This study". The reference for the two *Mycoplasma mycoides* subsp. *capri* strain D2503/91 and D2082/91 is now indicated as [Vilei et al. \(2006\)](#). The reference for the two *Mycoplasma feriruminatoris* strain G5813/1+2 and G1705 is now indicated as [Fischer et al. \(2012\)](#). The references for the *Mycoplasma feriruminatoris* strains 8756-C13 and G1650 are now indicated as [Manso-Silvan et al. \(2007\)](#) and [Schnee et al. \(2011\)](#), respectively.

The corrected [Table 1](#) and its caption appear below.

The authors apologize for these errors and state that these do not change the scientific conclusions of the article in any way. The original article has been updated.

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References

- Cordy, D., Adler, H., and Yamamoto, R. (1955). A pathogenic pleuropneumonia-like organism from goats. *Cornell. Vet.* 45, 50–68.
- Djordjevic, S. R., Forbes, W. A., Forbes-Faulkner, J., Kuhnert, P., Hum, S., Hornitzky, M. A., et al. (2001). Genetic diversity among *Mycoplasma* species bovine group 7: clonal isolates from an outbreak of polyarthritis, mastitis, and abortion in dairy cattle. *Electrophoresis* 22, 3551–3561. doi: 10.1002/1522-2683(200109)22:16<3551::AID-ELPS3551>3.0.CO;2-#
- Falquet, L., Liljander, A., Schieck, E., Gluecks, I., Frey, J., and Jores, J. (2014). Complete genome sequences of virulent *Mycoplasma capricolum* subsp. *capripneumoniae* strains F38 and ILRI181. *Genome Announc.* 2, e01041–e01041. doi: 10.1128/genomeA.01041-14
- Fischer, A., Santana-Cruz, I., Hegerman, J., Gourel, H., Schieck, E., Lambert, M., et al. (2015). High quality draft genomes of the *Mycoplasma mycoides* subsp. *mycoides* challenge strains Afadé and B237. *Stand. Genomic Sci.* 10, 89. doi: 10.1186/s40793-015-0067-0
- Fischer, A., Shapiro, B., Muriuki, C., Heller, M., Schnee, C., Bongcam-Rudloff, E., et al. (2012). The origin of the “*Mycoplasma mycoides* Cluster” coincides with domestication of ruminants. *PLoS ONE* 7, e36150. doi: 10.1371/journal.pone.0036150
- Jores, J., Fischer, A., Sirand-Pugnet, P., Thomann, A., Liebler-Tenorio, E. M., Schnee, C., et al. (2013). *Mycoplasma feriruminatoris* sp. nov., a fast growing *Mycoplasma* species isolated from wild *Caprinae*. *Syst. Appl. Microbiol.* 36, 533–538. doi: 10.1016/j.syapm.2013.07.005
- Lartigue, C., Vashee, S., Algire, M. A., Chuang, R.-Y., Benders, G. A., Ma, L., et al. (2009). Creating bacterial strains from genomes that have been cloned and engineered in yeast. *Science* 325, 1693–1696. doi: 10.1126/science.1173759
- Manso-Silvan, L., Perrier, X., and Thiaucourt, F. (2007). Phylogeny of the *Mycoplasma mycoides* cluster based on analysis of five conserved protein-coding sequences and possible implications for the taxonomy of the group. *Int. J. Syst. Evol. Microbiol.* 57, 2247–2258. doi: 10.1099/ijs.0.64918-0
- Schnee, C., Heller, M., Jores, J., Tomaso, H., and Neubauer, H. (2011). Assessment of a novel multiplex real-time PCR assay for the detection of the CBPP agent *Mycoplasma mycoides* subsp. *mycoides* SC through experimental infection in cattle. *BMC Vet. Res.* 7, 47. doi: 10.1186/1746-6148-7-47
- Thiaucourt, F., Lorenzon, S., David, A., and Breard, A. (2000). Phylogeny of the *Mycoplasma mycoides* cluster as shown by sequencing of a putative membrane protein gene. *Vet. Microbiol.* 72, 251–268. doi: 10.1016/S0378-1135(99)00204-7
- Thiaucourt, F., Manso-Silvan, L., Salah, W., Barbe, V., Vacherie, B., Jacob, D., et al. (2011). *Mycoplasma mycoides*, from “*mycoides* Small Colony” to “*capri*”. A microevolutionary perspective. *BMC Genom.* 12, 114. doi: 10.1186/1471-2164-12-114
- Vilei, E. M., Korczak, B. M., and Frey, J. (2006). *Mycoplasma mycoides* subsp. *capri* and *Mycoplasma mycoides* subsp. *mycoides* LC can be grouped into a single subspecies. *Vet. Res.* 37, 779–790. doi: 10.1051/vetres:2006037
- Wise, K. S., Calcutt, M. J., Foecking, M. F., Madupu, R., DeBoy, R. T., Röske, K., et al. (2012). Complete genome sequences of *Mycoplasma leachii* strain PG50^T and the pathogenic *Mycoplasma mycoides* subsp. *mycoides* small colony biotype strain Gladysdale. *J. Bacteriol.* 194, 4448–4449. doi: 10.1128/JB.00761-12

TABLE 1 *Mycoplasma* species used in this study.

| <i>Mycoplasma</i> species | Strain | Origin | Isolated | Host | Accession number | Reference |
|--|---|-------------|----------|---------------------|------------------|--|
| <i>M. leachii</i> | 99/014/06 | Australia | 1999 | Calf | FR668087.1 | Djordjevic et al., 2001 |
| <i>M. leachii</i> | PG50 ^T | Australia | 1963 | Cattle | CP002108.1 | Wise et al., 2012 |
| <i>M. mycoides</i> subsp. <i>capri</i> | D2083/91 | Switzerland | 1991 | Goat | | Thiaucourt et al., 2000 |
| <i>M. mycoides</i> subsp. <i>capri</i> | 95010 | France | 1995 | Goat | FQ377874.1 | Thiaucourt et al., 2011 |
| <i>M. mycoides</i> subsp. <i>capri</i> | D2503/91 | Switzerland | 1991 | Goat | | Vilei et al., 2006 |
| <i>M. mycoides</i> subsp. <i>capri</i> | D2082/91; D2482/91 | Switzerland | 1991 | Goat | | Vilei et al., 2006 |
| <i>M. mycoides</i> subsp. <i>capri</i> | GM12 | USA | 1979 | Goat | CP001621.1 | Lartigue et al., 2009 |
| <i>M. capricolum</i> subsp. <i>capricolum</i> | 6443.90 | France | 1990 | Goat | | Vilei et al., 2006 |
| <i>M. capricolum</i> subsp. <i>capricolum</i> | 4146 | France | 1980 | Goat | | Fischer et al., 2012 |
| <i>M. capricolum</i> subsp. <i>capricolum</i> | California kid ^T ; ATCC 27343 | USA | 1955 | Goat | CP000123.1 | Cordy et al., 1955 |
| <i>M. feriruminatoris</i> | G5847 ^T | Berlin | 1993 | Alpine Ibex | | Jores et al., 2013 |
| <i>M. feriruminatoris</i> | 8756-C13 | USA | <1987 | Rocky Mountain Goat | | Manso-Silvan et al., 2007 |
| <i>M. feriruminatoris</i> | G5813/1+2; 322/93 | Berlin | 1993 | Alpine Ibex | | Fischer et al., 2012 |
| <i>M. feriruminatoris</i> | G1650; 27/94 | Berlin | 1993 | Alpine Ibex | | Schnee et al., 2011 |
| <i>M. feriruminatoris</i> | G1705; 28/94 | Berlin | 1993 | Alpine Ibex | | Fischer et al., 2012 |
| <i>M. feriruminatoris</i> | 14/OD_0492 | Switzerland | 2014 | Alpine Ibex | | This study |
| <i>M. feriruminatoris</i> | 14/OD_0535 | Switzerland | 2014 | Alpine Ibex | | This study |
| <i>M. capricolum</i> subsp. <i>capripneumoniae</i> | F38 ^T | Kenya | 1976 | Goat | LN515398.1 | Falquet et al., 2014 |
| <i>M. mycoides</i> subsp. <i>mycoides</i> | Afade | Cameroon | 1968 | Cattle | LAEX01 | Fischer et al., 2015 |
| <i>M. mycoides</i> subsp. <i>mycoides</i> | Gladysdale | Australia | <1964 | Cattle | CP002107 | Wise et al., 2012 |
| <i>M. mycoides</i> subsp. <i>mycoides</i> | B237 | Kenya | 1987 | Cattle | LAEW01 | Fischer et al., 2015 |