Erratum: A phylogenomic and molecular signature based approach for characterization of the Phylum Spirochaetes and its major clades: proposal for a taxonomic revision of the phylum

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A commentary on

A phylogenomic and molecular signature based approach for characterization of the phylum Spirochaetes and its major clades: proposal for a taxonomic revision of the phylum

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Dr. Aharon Oren, the Editor and one of the List Editors of the Journal IJSEM, has informed us of a few minor errors in the protologues present in this publication which would prevent valid publication of the proposed names. The nomenclatural types we proposed for the new orders Brachyspirales ord. nov., Brevinematales ord. nov. and Leptospirales ord. nov. and the emended description we proposed for the order Spirochaetales (Buchanan, 1917) (Approved Lists 1980) were not in accordance with Rule 21a of the Bacteriological code and the etymology of the names of the family Borreliaceae fam. nov. and the orders Brachyspirales ord. nov., Brevinematales ord. nov. and Leptospirales ord. nov. were not in accordance with Rule 9 and Recommendation 6 of the Bacteriological code (Lapage et al., 1992). Hence, we are resubmitting revised protologues of the emendations and newly proposed taxa, correcting the minor errors present in the original submission.

EMENDED DESCRIPTION OF THE ORDER Spirochaetales Buchanan, 1917 (APPROVED LISTS 1980)
The order contains two families, Spirochaetaceae and Borreliaceae. Organisms are helical or coccoid, 0.1–75 μm in diameter and 3.5–250 μm in length. Cells do not have hooked ends. Cells may possess flagella. Periplasmic flagella overlap in the central region of the cell. The diamino acid component of the peptidoglycan is L-ornithine. Anaerobic, facultatively anaerobic, or microaerophilic. Organisms are chemoorganotrophic and utilize carbohydrates or amino acids as carbon and energy sources. Both free living and host associated members. The G+C content of the DNA is 27–66 (mol%). The type genus is Spirochaeta Ehrenberg 1835 (Approved Lists 1980) Skerman et al. (1980).

Organisms from this order are distinguished from all other bacteria examined to date by the conserved signature indels described in this report in the following proteins: 6-phosphofructokinase (pyrophosphate), bifunctional Hpr kinase/phosphatase and 30S ribosomal protein S13.

DESCRIPTION OF Borreliaceae fam. nov.
Borreliaceae (Bor.re'li.a'ce.ae. N.L. fem. n. Borrelia type genus of the family; -aceae ending to denote a family; N.L. fem. pl. n. Borreliaceae the family whose nomenclatural type is the genus Borrelia).

The family contains two genera Borrelia and Cristispira. Organisms are helical, 0.2–3 μm in diameter and 3–180 μm in length. Cells do not have hooked ends. Periplasmic flagella overlap in the central region of the cell. Cells are motile, host-associated and microaerophilic. The diamino acid component of the peptidoglycan is L-ornithine. Organisms are chemoorganotrophic and utilize carbohydrates or amino acids as carbon and energy sources. The G+C content of the DNA is 27–32 (mol%). The type genus is Borrelia.
The genus is the DNA is 24–28 (mol%). The type genus is halose, and amino sugars as carbon and disaccharides, the trisaccharide treotrophic and utilize monosaccharides, L-ornithine. Organisms are chemoheterotrophic and aerotolerant. The diamino acid component of the peptidoglycan is ε-aminocaproic acid and do not have hooked ends. Periplasmic flagella overlap in the central region of the cell. Cells are motile, host-associated and obligately anaerobic and acetotolerant. The diamino acid component of the peptidoglycan is L-ornithine. Organisms are helical, 0.2–0.4 μm in diameter and 2–11 μm in length. Cell ends may be blunt or pointed and do not have hooked ends. Periplasmic flagella do not overlap in the central region of the cell. Cells are motile, host-associated and obligately anaerobic and acetotolerant. The diamino acid component of the peptidoglycan is ε-aminocaproic acid. Obligately aerobic or microaerophilic. Organisms are chemotaxonomic and utilize long-chain fatty acids or long-chain fatty alcohols as carbon and energy sources. Both free living and host-associated members. The G+C content of the DNA is 33–55 (mol%). The type genus is Brachyspira (Hovind-Hougen, 1983).

EMENDED DESCRIPTION OF THE FAMILY Brachyspiraceae Paster, 2012a

The family contains one genus, Brachyspira. The description of the family Brachyspiraceae (Paster, 2012a) is the same as that of the order Brachyspirales ord. nov. The type genus is Brachyspira (Hovind-Hougen, 1983).

DESCRIPTION OF Brevinematales ord. nov.

Brevinematales (Bre.vi.ne.ma.ta'les. N.L. fem. n. Brevinema type genus of the order; suff. -ales ending to denote an order; N.L. fem. pl. n. Brevinematales the order whose nomenclatural type is the genus Brevinema).

The order contains one family, Brevinemataceae. The description of this order is the same as that of the family Brevinemataceae (Paster, 2012b). The type genus is Brevinema (Defosse et al., 1995).

DESCRIPTION OF Leptospirales ord. nov.

Leptospirales (Lepto.spi.ra'les. N.L. fem. n. Leptospira type genus of the order; suff. -ales ending to denote an order; N.L. fem. pl. n. Leptospirales the order whose nomenclatural type is the genus Leptospira).

The order contains one family, Leptospiraceae. The description of this order is the same as that of the order Leptospirales ord. nov. The type genus is Leptospira (Noguchi, 1917) (Approved Lists 1980).

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