

Epilinea brevis sp. nov.

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Order *Epilineales*

Etymology

[E.pi.li.ne.a'les] N.L. fem. n. *Epilinea*, referring to the type genus *Epilinea*; *-ales*, ending to denote an order; N.L. fem. pl. n. *Epilineales*, the *Epilinea* order

Nomenclatural type

Genus *Epilinea*

Description

An order established on the basis of MiGA taxonomic novelty analyses, 16S rRNA gene phylogenetic reconstruction, FISH and phylogenomic analyses and is classified as a member of the Anaerolineae class. The type species is *Epilinea brevis*.

Classification

Bacteria » *Chloroflexota* » *Anaerolineae* » *Epilineales*

References

Effective publication: Petriglieri et al., 2023 [1]

Registry URL

<https://seqco.de/i:43966>

Family *Epilineaceae*

Etymology

[E.pi.li.ne.a'ce.ae] N.L. fem. n. *Epilinea*, referring to the type genus *Epilinea*; *-aceae*, ending to denote a family; N.L. fem. pl. n. *Epilineaceae*, the *Epilinea* family

Nomenclatural type

Genus *Epilinea*

Description

A family established on the basis of MiGA taxonomic novelty analyses, 16S rRNA gene phylogenetic reconstruction, FISH and phylogenomic analyses and is classified as a member of the *Epilineales* order. The type species is *Epilinea brevis*.

Classification

Bacteria » *Chloroflexota* » *Anaerolineae* » *Epilineales* » *Epilineaceae*

References

Effective publication: Petriglieri et al., 2023 [1]

Assigned taxonomically: Petriglieri et al., 2023 [1]

Registry URL

<https://seqco.de/i:43956>

Family *Villigracilaceae*

Etymology

[Vi.lli.gra.ci.la'ce.ae] N.L. masc. n. *Villigracilis*, referring to the type genus *Villigracilis*; *-aceae*, ending to denote a family; N.L. fem. pl. n. *Villigracilaceae*, the *Villigracilis* family

Nomenclatural type

Genus *Villigracilis*

Description

A family established on the basis of MiGA taxonomic novelty analyses, 16S rRNA gene phylogenetic reconstruction, FISH and phylogenomic analyses and is classified as a member of the Anaerolineales order. The type species is *Villigracilis saccharophilus*.

Classification

Bacteria » *Chloroflexota* » *Anaerolineae* » *Anaerolineales* » *Villigracilaceae*

References

Effective publication: Petriglieri et al., 2023 [1]

Registry URL

<https://seqco.de/i:43974>

Family *Flexifilaceae*

Etymology

[Fle.xi.fi.la'ce.ae] N.L. neut. n. *Flexifilum*, referring to the type genus *Flexifilum*; *-aceae*, ending to denote a family; N.L. fem. pl. n. *Flexifilaceae*, the *Flexifilum* family

Nomenclatural type

Genus *Flexifilum*

Description

A family established on the basis of MiGA taxonomic novelty analyses, 16S rRNA gene phylogenetic reconstruction, FISH and phylogenomic analyses and is classified as a member of the Epilineales order. The type species is *Flexifilum breve*.

Classification

Bacteria » *Chloroflexota* » *Anaerolineae* » *Aggregatilineales* » *Flexifilaceae*

References

Effective publication: Petriglieri et al., 2023 [1]

Registry URL

<https://seqco.de/i:44001>

Genus *Defluviilinea*

Etymology

[De.flu.vi.i.li.ne'a] L. neut. n. *defluvium*, sewage; L. fem. n. *linea*, line, filament; N.L. fem. n. *Defluviilinea*, filamentous bacterium found in sewage

Nomenclatural type

Species *Defluviilinea gracilis*^{T5}

Description

A genus established on the basis of MiGA taxonomic novelty analyses, ANI, 16S rRNA gene phylogenetic reconstruction, FISH and phylogenomic analyses and is classified as a member of the Villigracilaceae family. The type species of the genus is *Defluviilinea gracilis*.

Classification

Bacteria » *Chloroflexota* » *Anaerolineae* » *Anaerolineales* » *Villigracilaceae* » *Defluviilinea*

References

Effective publication: Petriglieri et al., 2023 [1]
Assigned taxonomically: Petriglieri et al., 2023 [1]

Registry URL

<https://seqco.de/i:43973>

Genus *Villigracilis*

Etymology

[Vi.lli.gra.ci'lis] L. masc. n. *villus*, tuft of hair; L. masc. adj. *gracilis*, slim, slender; N.L. masc. n. *Villigracilis*, bacteria shaped as a slender tuft of hair

Nomenclatural type

Species *Villigracilis saccharophilus*^{Ts}

Description

A genus established on the basis of MiGA taxonomic novelty analyses, ANI, 16S rRNA gene phylogenetic reconstruction, FISH and phylogenomic analyses and is classified as a member of the Villigracilaceae. The type species of the genus is *Villigracilis saccharophilus*.

Classification

Bacteria » *Chloroflexota* » *Anaerolineae* » *Anaerolineales* » *Villigracilaceae* » *Villigracilis*

References

Effective publication: Petriglieri et al., 2023 [1]
Assigned taxonomically: Petriglieri et al., 2023 [1]

Registry URL

<https://seqco.de/i:43977>

Genus *Flexifilum*

Etymology

[Fle.xi.fi'lum] L. masc. part. *flexus*, bent; L. neut. n. *filum*, thread; N.L. neut. n. *Flexifilum*, bent-shaped filamentous bacterium

Nomenclatural type

Species *Flexifilum breve*^{Ts}

Description

A genus established on the basis of MiGA taxonomic novelty analyses, ANI, 16S rRNA gene phylogenetic reconstruction, FISH and phylogenomic analyses and is classified as a member of the Promineofilaceae family. The type species of the genus is *Flexifilum breve*.

Classification

Bacteria » *Chloroflexota* » *Anaerolineae* » *Aggregatilineales* » *Flexifilaceae* » *Flexifilum*

References

Effective publication: Petriglieri et al., 2023 [1]
Assigned taxonomically: Petriglieri et al., 2023 [1]

Registry URL

<https://seqco.de/i:44000>

Genus *Flexicrinis*

Etymology

[Fle.xi.cri'nis] L. **masc. part.** *flexus*, bent; L. **masc. n.** *crinis*, hair, filament; N.L. **masc. n.** *Flexicrinis*, bent-shaped filamentous bacterium

Nomenclatural type

Species *Flexicrinis affinis*^{Ts}

Description

A genus established on the basis of MiGA taxonomic novelty analyses, ANI, 16S rRNA gene phylogenetic reconstruction and phylogenomic analyses and is classified as a member of the Promineofilaceae family. The type species of the genus is *Flexicrinis affinis*.

Classification

Bacteria » *Chloroflexota* » *Anaerolineae* » *Aggregatilineales* » *Flexifilaceae* » *Flexicrinis*

References

Effective publication: Petriglieri et al., 2023 [1]
Assigned taxonomically: Petriglieri et al., 2023 [1]

Registry URL

<https://seqco.de/i:43997>

Genus *Amarobacter*

Etymology

[A.ma.ro.bac'ter] Gr. **fem. n.** *amara*, trench, conduit, here a sewage conduit; N.L. **masc. n.** *bacter*, rod-shaped bacterium; N.L. **masc. n.** *Amarobacter*, rod-shaped bacterium found in sewage sludge

Nomenclatural type

Species *Amarobacter glycogenicus*^{Ts}

Description

A genus established on the basis of MiGA taxonomic novelty analyses, ANI, 16S rRNA gene phylogenetic reconstruction, FISH and phylogenomic analyses and is classified as a member of the Tepidiformalceae family. The type species of the genus is *Amarobacter glycogenicus*.

Classification

Bacteria » *Chloroflexota* » *Tepidiformia* » *Tepidiformales* » *Tepidiformaceae* » *Amarobacter*

References

Effective publication: Petriglieri et al., 2023 [1]

Registry URL

<https://seqco.de/i:44011>

Genus *Amarobacillus*

Etymology

[A.ma.ro.ba.cil'lus] Gr. **fem. n.** *amara*, trench, conduit, here a sewage conduit; N.L. **masc. n.** *bacillus*, rod-shaped bacterium; N.L. **masc. n.** *Amarobacillus*, rod-shaped bacterium from activated sludge

Nomenclatural type

Species *Amarobacillus elongatus*^{Ts}

Description

A genus established on the basis of MiGA taxonomic novelty analyses, ANI, 16S rRNA gene phylogenetic reconstruction, FISH and phylogenomic analyses and is classified as a member of the Tepidiformaceae family. The type species of the genus is *Amarobacillus elongatus*.

Classification

Bacteria » *Chloroflexota* » *Tepidiformia* » *Tepidiformales* » *Tepidiformaceae* » *Amarobacillus*

References

Effective publication: Petriglieri et al., 2023 [1]

Registry URL

<https://seqco.de/i:44013>

Genus *Epilinea*

Etymology

[E.pi.li.ne'a] Gr. pref. *epi*, on; L. fem. n. *linea*, line; N.L. fem. n. *Epilinea*, filamentous bacteria attached to other filaments

Nomenclatural type

Species *Epilinea brevis*^{T5}

Description

A genus established on the basis of MiGA taxonomic novelty analyses, ANI, 16S rRNA gene phylogenetic reconstruction, FISH and phylogenomic analyses and is classified as a member of the *Epilineaceae* family. The type species of the genus is *Epilinea brevis*.

Classification

Bacteria » *Chloroflexota* » *Anaerolineae* » *Epilineales* » *Epilineaceae* » *Epilinea*

References

Effective publication: Petriglieri et al., 2023 [1]

Assigned taxonomically: Petriglieri et al., 2023 [1]

Registry URL

<https://seqco.de/i:43955>

Genus *Avedoeria*

Etymology

[A.ve.doe'ri.a] N.L. fem. n. *Avedoeria*, arbitrarily formed genus name to refer to a bacterium named after the city Avedoere where the MAG has been retrieved

Nomenclatural type

Species *Avedoeria danica*^{T5}

Description

A genus established on the basis of MiGA taxonomic novelty analyses, ANI, 16S rRNA gene phylogenetic reconstruction, FISH and phylogenomic analyses and is classified as a member of the *Epilineaceae* family. The type species of the genus is *Avedoeria danica*.

Classification

Bacteria » *Chloroflexota* » *Anaerolineae* » *Epilineales* » *Epilineaceae* » *Avedoeria*

References

Effective publication: Petriglieri et al., 2023 [1]

Assigned taxonomically: Petriglieri et al., 2023 [1]

Registry URL

<https://seqco.de/i:43968>

Genus *Fredericiella*

Etymology

[Fre.de.ri.ci.el'la] N.L. fem. dim. n. *Fredericiella*, Bacterium named after the city Fredericia

Nomenclatural type

Species *Fredericiella danica*^{Ts}

Description

A genus established on the basis of MiGA taxonomic novelty analyses, ANI, 16S rRNA gene phylogenetic reconstruction and phylogenomic analyses and is classified as a member of the Caldilineaceae family. The type species of the genus is *Fredericiella danica*.

Classification

Bacteria » *Chloroflexota* » *Caldilineae* » *Caldilineales* » *Caldilineaceae* » *Fredericiella*

References

Effective publication: Petriglieri et al., 2023 [1]

Registry URL

<https://seqco.de/i:44004>

Genus *Ribeiella*

Etymology

[Ri.be.i.el'la] N.L. fem. dim. n. *Ribeiella*, Bacterium named after the city of Ribe

Nomenclatural type

Species *Ribeiella danica*^{Ts}

Description

A genus established on the basis of MiGA taxonomic novelty analyses, ANI, 16S rRNA gene phylogenetic reconstruction and phylogenomic analyses and is classified as a member of the Roseiflexaceae family. The type species of the genus is *Ribeiella danica*.

Classification

Bacteria » *Chloroflexota* » *Chloroflexia* » *Chloroflexales* » *Roseiflexaceae* » *Ribeiella*

References

Effective publication: Petriglieri et al., 2023 [1]

Registry URL

<https://seqco.de/i:44006>

Genus *Hadersleviella*

Etymology

[Ha.der.sle.vi.e'lla] N.L. fem. n. *Hadersleviella*, bacterium named after the city Haderslev where the MAG has been retrieved

Nomenclatural type

Species *Hadersleviella danica*^{Ts}

Description

A genus established on the basis of MiGA taxonomic novelty analyses, ANI, 16S rRNA gene phylogenetic reconstruction, FISH and phylogenomic analyses and is classified as a member of the Promineofilaceae family. The type species of the genus is *Hadersleviella danica*.

Classification

Bacteria » *Chloroflexota* » *Anaerolineae* » *Promineifilales* » *Promineofilaceae* » *Hadersleviella*

References

Effective publication: Petriglieri et al., 2023 [1]

Registry URL

<https://seqco.de/i:43984>

Genus *Leptofilum*

Etymology

[Lep.to.fi'lum] Gr. **masc. adj.** *leptos*, thin; L. **neut. adj.** *filum*, thread; N.L. **neut. n.** *Leptofilum*, bacterium with thin filamentous morphology

Nomenclatural type

Species *Leptofilum gracile*^{Ts}

Description

A genus established on the basis of MiGA taxonomic novelty analyses, ANI, 16S rRNA gene phylogenetic reconstruction, FISH and phylogenomic analyses and is classified as a member of the Promineofilaceae family. The type species of the genus is *Leptofilum gracile*.

Classification

Bacteria » *Chloroflexota* » *Anaerolineae* » *Promineifilales* » *Promineofilaceae* » *Leptofilum*

References

Effective publication: Petriglieri et al., 2023 [1]

Registry URL

<https://seqco.de/i:43990>

Genus *Leptovillus*

Etymology

[Lep.to.vi'llus] Gr. **masc. adj.** *leptos*, thin; L. **masc. n.** *villus*, hair, filament; N.L. **masc. n.** *Leptovillus*, thin filamentous bacterium

Nomenclatural type

Species *Leptovillus gracilis*^{Ts}

Description

A genus established on the basis of MiGA taxonomic novelty analyses, ANI, 16S rRNA gene phylogenetic reconstruction, FISH and phylogenomic analyses and is classified as a member of the Promineofilaceae family. The type species of the genus is *Leptovillus gracilis*.

Classification

Bacteria » *Chloroflexota* » *Anaerolineae* » *Promineifilales* » *Promineofilaceae* » *Leptovillus*

References

Effective publication: Petriglieri et al., 2023 [1]

Registry URL

<https://seqco.de/i:43994>

Genus *Trichofilum*

Etymology

[Tri.cho.fi'lum] Gr. **fem. n.** *thrix*, hair, filament; L. **neut. n.** *filum*, thread; N.L. **neut. n.** *Trichofilum*, bacterium with filamentous morphology

Nomenclatural type

Species *Trichofilum aggregatum*^{Ts}

Description

A genus established on the basis of MiGA taxonomic novelty analyses, ANI, 16S rRNA gene phylogenetic reconstruction, FISH and phylogenomic analyses and is classified as a member of the Promineofilaceae family. The type species of the genus is *Trichofilum aggregatum*.

Classification

Bacteria » *Chloroflexota* » *Anaerolineae* » *Promineifilales* » *Promineofilaceae* » *Trichofilum*

References

Effective publication: Petriglieri et al., 2023 [1]

Registry URL

<https://seqco.de/i:43986>

Genus *Kouleothrix*

Etymology

[Ko.u.le.oth'rix] Gr. neut. n. *kouleon*, sheath; Gr. fem. n. *thrix*, hair, filament; N.L. fem. n. *Kouleothrix*, sheath filamentous bacteria

Nomenclatural type

Species *Kouleothrix ribensis*^{Ts}

Description

Filamentous organisms abundant in activated sludge worldwide, sometime associated with bulking episodes. They are often arranged in bundles of filaments with epiphytic bacteria. Specialized in metabolism of sugars.

Classification

Bacteria » *Chloroflexota* » *Chloroflexia* » *Chloroflexales* » *Roseiflexaceae* » *Kouleothrix*

References

Effective publication: Petriglieri et al., 2023 [1]

Original (not valid) publication: Klappenbach, Pierson, 2004 [2]

Registry URL

<https://seqco.de/i:35217>

Species *Epilinea brevis*^{Ts}

Etymology

[bre'vis] L. fem. adj. *brevis*, short

Nomenclatural type

[NCBI Assembly: GCA_016710785.1](#)^{Ts}

Description

The species is established on the same basis as the genus and the type material is the genome Hirt_BATAC.427. Fluorescence in situ hybridization with genus-specific FISH probes shows filamentous morphology (4-57 × 0.4-0.7 μm).

Classification

Bacteria » *Chloroflexota* » *Anaerolineae* » *Epilineales* » *Epilineaceae* » *Epilinea* » *Epilinea brevis*^{Ts}

References

Effective publication: Petriglieri et al., 2023 [1]

Assigned taxonomically: Petriglieri et al., 2023 [1]

Registry URL

<https://seqco.de/i:43954>

Species *Avedoeria danica*^{Ts}

Etymology

[da.ni'ca] L. fem. adj. *danica*, Danish

Nomenclatural type

[NCBI Assembly: GCA_016703025.1](#)^{Ts}

Description

The species is established on the same basis as the genus and the type material is the genome Aved_BATAC.767.

Classification

Bacteria » *Chloroflexota* » *Anaerolineae* » *Epilineales* » *Epilineaceae* » *Avedoeria* » *Avedoeria danica*^{Ts}

References

Effective publication: Petriglieri et al., 2023 [1]

Assigned taxonomically: Petriglieri et al., 2023 [1]

Registry URL

<https://seqco.de/i:43967>

Species *Defluviilinea gracilis*^{Ts}

Etymology

[gra.ci'lis] L. fem. adj. *gracilis*, slender

Nomenclatural type

[NCBI Assembly: GCA_016716235.1](#)^{Ts}

Description

The species is established on the same basis as the genus and the type material is the genome Kalu_BAT3C.361. Fluorescence in situ hybridization with genus-specific FISH probes shows filamentous morphology (12-50 × 0.3-0.4 μm).

Classification

Bacteria » *Chloroflexota* » *Anaerolineae* » *Anaerolineales* » *Villigracilaceae* » *Defluviilinea* » *Defluviilinea gracilis*^{Ts}

References

Effective publication: Petriglieri et al., 2023 [1]

Assigned taxonomically: Petriglieri et al., 2023 [1]

Registry URL

<https://seqco.de/i:43972>

Species *Defluviilinea proxima*

Etymology

[pro.xi'ma] L. fem. adj. *proxima*, next of kin

Nomenclatural type

[NCBI Assembly: GCA_016721115.1](#)^{Ts}

Description

The species is established on the same basis as the genus and the type material is the genome Skiv_MAXAC.174. Fluorescence in situ hybridization with genus-specific FISH probes shows filamentous morphology (12-50 × 0.3-0.4 μm).

Classification

Bacteria » *Chloroflexota* » *Anaerolineae* » *Anaerolineales* » *Villigracilaceae* » *Defluviilinea* » *Defluviilinea proxima*

References

Effective publication: Petriglieri et al., 2023 [1]
Assigned taxonomically: Petriglieri et al., 2023 [1]

Registry URL

<https://seqco.de/i:43975>

Species *Villigracilis vicinus*

Etymology

[vi.ci'nus] L. masc. adj. *vicinus*, close

Nomenclatural type

[NCBI Assembly: GCA_016721315.1](#)^{Ts}

Description

The species is established on the same basis as the genus and the type material is the genome Skiv_MAXAC.043. Fluorescence in situ hybridization with genus-specific FISH probes shows filamentous morphology (12-50 × 0.3-0.4 µm).

Classification

Bacteria » *Chloroflexota* » *Anaerolineae* » *Anaerolineales* » *Villigracilaceae* » *Villigracilis* » *Villigracilis vicinus*

References

Effective publication: Petriglieri et al., 2023 [1]
Assigned taxonomically: Petriglieri et al., 2023 [1]

Registry URL

<https://seqco.de/i:43976>

Species *Villigracilis propinquus*

Etymology

[pro.pin'quus] L. masc. adj. *propinquus*, next of kin

Nomenclatural type

[NCBI Assembly: GCA_016714565.1](#)^{Ts}

Description

The species is established on the same basis as the genus and the type material is the genome OdNW_BATAC.378. Fluorescence in situ hybridization with genus-specific FISH probes shows filamentous morphology (12-50 × 0.3-0.4 µm).

Classification

Bacteria » *Chloroflexota* » *Anaerolineae* » *Anaerolineales* » *Villigracilaceae* » *Villigracilis* » *Villigracilis propinquus*

References

Effective publication: Petriglieri et al., 2023 [1]
Assigned taxonomically: Petriglieri et al., 2023 [1]

Registry URL

<https://seqco.de/i:43979>

Species *Villigracilis affinis*

Etymology

[af.fi'nis] L. masc. adj. *affinis*, next of kin

Nomenclatural type

[NCBI Assembly: GCA_016718275.1](#)^{Ts}

Description

The species is established on the same basis as the genus and the type material is the genome OdNW_MAXAC.037. Fluorescence in situ hybridization with genus-specific FISH probes shows filamentous morphology (12-50 × 0.3-0.4 μm).

Classification

Bacteria » *Chloroflexota* » *Anaerolineae* » *Anaerolineales* » *Villigracilaceae* » *Villigracilis* » *Villigracilis affinis*

References

Effective publication: Petriglieri et al., 2023 [1]
Assigned taxonomically: Petriglieri et al., 2023 [1]

Registry URL

<https://seqco.de/i:43980>

Species *Villigracilis proximus*

Etymology

[pro.xi'mus] L. masc. adj. *proximus*, next of kin

Nomenclatural type

[NCBI Assembly: GCA_016714625.1](#)^{Ts}

Description

The species is established on the same basis as the genus and the type material is the genome OdNE_MAXAC.047. Fluorescence in situ hybridization with genus-specific FISH probes shows filamentous morphology (12-50 × 0.3-0.4 μm).

Classification

Bacteria » *Chloroflexota* » *Anaerolineae* » *Anaerolineales* » *Villigracilaceae* » *Villigracilis* » *Villigracilis proximus*

References

Effective publication: Petriglieri et al., 2023 [1]
Assigned taxonomically: Petriglieri et al., 2023 [1]

Registry URL

<https://seqco.de/i:43981>

Species *Villigracilis saccharophilus*^{Ts}

Etymology

[sac.cha.ro.phi'lus] Gr. neut. n. *saccharon*, sugar; Gr. masc. n. *philos*, lover; N.L. masc. adj. *saccharophilus*, indicating a preference for sugars as carbon sources

Nomenclatural type

[NCBI Assembly: GCA_016709305.1](#)^{Ts}

Description

The species is established on the same basis as the genus and the type material is the genome EsbW_MAXAC.021. Fluorescence in situ hybridization with genus-specific FISH probes shows filamentous morphology (12-50 × 0.3-0.4 μm).

Classification

Bacteria » *Chloroflexota* » *Anaerolineae* » *Anaerolineales* » *Villigracilaceae* » *Villigracilis* » *Villigracilis saccharophilus*^{Ts}

References

Effective publication: Petriglieri et al., 2023 [1]
Assigned taxonomically: Petriglieri et al., 2023 [1]

Registry URL

<https://seqco.de/i:43982>

Species *Hadersleviella danica*^{Ts}

Etymology

[da.ni'ca] L. fem. adj. *danica*, Danish

Nomenclatural type

[NCBI Assembly: GCA_016711405.1](#)^{Ts}

Description

The species is established on the same basis as the genus and the type material is the genome Hade_MAXAC.236_sub.

Classification

Bacteria » *Chloroflexota* » *Anaerolineae* » *Promineifilales* » *Promineifilaceae* » *Hadersleviella* » *Hadersleviella danica*^{Ts}

References

Effective publication: Petriglieri et al., 2023 [1]
Assigned taxonomically: Petriglieri et al., 2023 [1]

Registry URL

<https://seqco.de/i:43983>

Species *Trichofilum aggregatum*^{Ts}

Etymology

[ag.gre.ga'tum] L. neut. adj. *aggregatum*, indicating the bundles often formed with other filaments

Nomenclatural type

[NCBI Assembly: GCA_016716885.1](#)^{Ts}

Description

The species is established on the same basis as the genus and the type material is the genome Hirt_MAXAC.142. Fluorescence in situ hybridization with genus-specific FISH probes shows filamentous morphology (60-200 × 0.6-0.8 µm).

Classification

Bacteria » *Chloroflexota* » *Anaerolineae* » *Promineifilales* » *Promineifilaceae* » *Trichofilum* » *Trichofilum aggregatum*^{Ts}

References

Effective publication: Petriglieri et al., 2023 [1]
Assigned taxonomically: Petriglieri et al., 2023 [1]

Registry URL

<https://seqco.de/i:43985>

Species *Leptofilum proximum*

Etymology

[pro.xi'mum] L. neut. adj. *proximum*, next of kin

Nomenclatural type

[NCBI Assembly: GCA_016710325.1](#)^{Ts}

Description

The species is established on the same basis as the genus and the type material is the genome Kalu_MAXAC.106v2. Fluorescence in situ hybridization with genus-specific FISH probes shows filamentous morphology (10-70 × 0.7-0.9 μm).

Classification

Bacteria » *Chloroflexota* » *Anaerolineae* » *Promineifilales* » *Promineifilaceae* » *Leptofilum* » *Leptofilum proximum*

References

Effective publication: Petriglieri et al., 2023 [1]
Assigned taxonomically: Petriglieri et al., 2023 [1]

Registry URL

<https://seqco.de/i:43991>

Species *Leptovillus affinis*

Etymology

[af.fi'nis] L. masc. adj. *affinis*, next of kin

Nomenclatural type

[NCBI Assembly: GCA_016705235.1](#)^{Ts}

Description

The species is established on the same basis as the genus and the type material is the genome AaLE_BATAC.251. Fluorescence in situ hybridization with genus-specific FISH probes shows filamentous morphology (10-70 × 0.7-0.9 μm).

Classification

Bacteria » *Chloroflexota* » *Anaerolineae* » *Promineifilales* » *Promineifilaceae* » *Leptovillus* » *Leptovillus affinis*

References

Effective publication: Petriglieri et al., 2023 [1]
Assigned taxonomically: Petriglieri et al., 2023 [1]

Registry URL

<https://seqco.de/i:43993>

Species *Flexicrinis affinis*^{Ts}

Etymology

[af.fi'nis] L. masc. adj. *affinis*, next of kin

Nomenclatural type

[NCBI Assembly: GCA_016716525.1](#)^{Ts}

Description

The species is established on the same basis as the genus and the type material is the genome Kalu_BAT3C.186. Fluorescence in situ hybridization with genus-specific FISH probes shows filamentous morphology (40-110 × 0.7-1.1 μm).

Classification

Bacteria » *Chloroflexota* » *Anaerolineae* » *Aggregatilineales* » *Flexifilaceae* » *Flexicrinis* » *Flexicrinis affinis*^{Ts}

References

Effective publication: Petriglieri et al., 2023 [1]
Assigned taxonomically: Petriglieri et al., 2023 [1]

Registry URL

<https://seqco.de/i:43995>

Species *Flexicrinis proximus*

Etymology

[pro.xi'mus] L. masc. adj. *proximus*, next of kin

Nomenclatural type

[NCBI Assembly: GCA_016712885.1](#)^{Ts}

Description

The species is established on the same basis as the genus and the type material is the genome Fred_MAXAC.112. Fluorescence in situ hybridization with genus-specific FISH probes shows filamentous morphology (40-110 × 0.7-1.1 μm).

Classification

Bacteria » *Chloroflexota* » *Anaerolineae* » *Aggregatilineales* » *Flexifilaceae* » *Flexicrinis* » *Flexicrinis proximus*

References

Effective publication: Petriglieri et al., 2023 [1]
Assigned taxonomically: Petriglieri et al., 2023 [1]

Registry URL

<https://seqco.de/i:43996>

Species *Flexifilum breve*^{Ts}

Etymology

[bre've] L. neut. adj. *breve*, short

Nomenclatural type

[NCBI Assembly: GCA_016717205.1](#)^{Ts}

Description

The species is established on the same basis as the genus and the type material is the genome Ribe_BATAC.253. Fluorescence in situ hybridization with genus-specific FISH probes shows filamentous morphology (>100 × 0.8-1.1 μm).

Classification

Bacteria » *Chloroflexota* » *Anaerolineae* » *Aggregatilineales* » *Flexifilaceae* » *Flexifilum* » *Flexifilum breve*^{Ts}

References

Effective publication: Petriglieri et al., 2023 [1]
Assigned taxonomically: Petriglieri et al., 2023 [1]

Registry URL

<https://seqco.de/i:43998>

Species *Flexifilum affine*

Etymology

[af.fi'ne] L. neut. adj. *affine*, next of kin

Nomenclatural type

[NCBI Assembly: GCA_016713325.1](#)^{Ts}

Description

The species is established on the same basis as the genus and the type material is the genome Fred_MAXAC.112. Fluorescence in situ hybridization with genus-specific FISH probes shows filamentous morphology (40-110 × 0.7-1.1 μm).

Classification

Bacteria » *Chloroflexota* » *Anaerolineae* » *Aggregatilineales* » *Flexifilaceae* » *Flexifilum* » *Flexifilum affine*

References

Effective publication: Petriglieri et al., 2023 [1]
Assigned taxonomically: Petriglieri et al., 2023 [1]

Registry URL

<https://seqco.de/i:43999>

Species *Amarolinea dominans*

Etymology

[do'mi.nans] L. part. adj. *dominans*, indicating the high abundance in sewage sludge

Nomenclatural type

[NCBI Assembly: GCA_016719785.1](#)^{Ts}

Description

A species of filamentous bacteria abundant in activated sludge globally.

Classification

Bacteria » *Chloroflexota* » *Anaerolineae* » "Amarolineales" » *Amarolineaceae* » *Amarolinea* » *Amarolinea dominans*

References

Effective publication: Petriglieri et al., 2023 [1]
Assigned taxonomically: Andersen et al., 2019 [3]

Registry URL

<https://seqco.de/i:44002>

Species *Fredericiella danica*^{Ts}

Etymology

[da.ni'ca] L. fem. adj. *danica*, Danish

Nomenclatural type

[NCBI Assembly: GCA_016713335.1](#)^{Ts}

Description

A species established on the basis of MiGA taxonomic novelty analyses, ANI, 16S rRNA gene phylogenetic reconstruction and phylogenomic analyses.

Classification

Bacteria » *Chloroflexota* » *Caldilineae* » *Caldilineales* » *Caldilineaceae* » *Fredericiella* » *Fredericiella danica*^{Ts}

References

Effective publication: Petriglieri et al., 2023 [1]
Assigned taxonomically: Petriglieri et al., 2023 [1]

Registry URL

<https://seqco.de/i:44003>

Species *Caldilinea saccharophila*

Etymology

[sac.cha.ro'phi.la] Gr. neut. n. *saccharon*, sugar; Gr. masc. n. *philos*, lover; N.L. fem. adj. *saccharophila*, indicating a preference for sugars as carbon sources

Nomenclatural type

[NCBI Assembly: GCA_016710365.1](#) ^{Ts}

Description

A species established on the basis of MiGA taxonomic novelty analyses, ANI, 16S rRNA gene phylogenetic reconstruction, FISH and phylogenomic analyses.

Classification

Bacteria » *Chloroflexota* » *Caldilineae* » *Caldilineales* » *Caldilineaceae* » *Caldilinea* » *Caldilinea saccharophila*

References

Effective publication: Petriglieri et al., 2023 [1]

Registry URL

<https://seqco.de/i:44005>

Species *Ribeiella danica*^{Ts}

Etymology

[da.ni'ca] L. fem. adj. *danica*, Danish

Nomenclatural type

[NCBI Assembly: GCA_016717335.1](#) ^{Ts}

Description

A species abundant in activated sludge, established on the basis of MiGA taxonomic novelty analyses, ANI, 16S rRNA gene phylogenetic reconstruction and phylogenomic analyses.

Classification

Bacteria » *Chloroflexota* » *Chloroflexia* » *Chloroflexales* » *Roseiflexaceae* » *Ribeiella* » *Ribeiella danica*^{Ts}

References

Effective publication: Petriglieri et al., 2023 [1]

Assigned taxonomically: Petriglieri et al., 2023 [1]

Registry URL

<https://seqco.de/i:44007>

Species *Kouleothrix ribensis*^{Ts}

Etymology

[ri.ben'sis] N.L. fem. adj. *ribensis*, pertinent to the city of Ribe

Nomenclatural type

[NCBI Assembly: GCA_016722075.1](#) ^{Ts}

Description

A species of filamentous bacteria abundant in activated sludge, established on the basis of MiGA taxonomic novelty analyses, ANI, 16S rRNA gene phylogenetic reconstruction and phylogenomic analyses

Classification

Bacteria » *Chloroflexota* » *Chloroflexia* » *Chloroflexales* » *Roseiflexaceae* » *Kouleothrix* » *Kouleothrix ribensis*^{Ts}

References

Effective publication: Petriglieri et al., 2023 [1]

Registry URL

<https://seqco.de/i:44008>

Species *Amarobacter glycogenicus*^{Ts}

Etymology

[gly.co.ge'ni.cus] N.L. masc. adj. *glycogenicus*, indicating the presence of intracellular glycogen

Nomenclatural type

[NCBI Assembly: GCA_016719395.1](#)^{Ts}

Description

A species of rod-shape bacteria abundant in activated sludge, established on the basis of MiGA taxonomic novelty analyses, ANI, 16S rRNA gene phylogenetic reconstruction, FISH and phylogenomic analyses.

Classification

Bacteria » *Chloroflexota* » *Tepidiformia* » *Tepidiformales* » *Tepidiformaceae* » *Amarobacter* » *Amarobacter glycogenicus*^{Ts}

References

Effective publication: Petriglieri et al., 2023 [1]
Assigned taxonomically: Petriglieri et al., 2023 [1]

Registry URL

<https://seqco.de/i:44010>

Species *Amarobacillus elongatus*^{Ts}

Etymology

[e.lon.ga'tus] L. masc. adj. *elongatus*, with elongated shape

Nomenclatural type

[NCBI Assembly: GCA_016703545.1](#)^{Ts}

Description

A species of bacteria abundant in activated sludge, established on the basis of MiGA taxonomic novelty analyses, ANI, 16S rRNA gene phylogenetic reconstruction, FISH and phylogenomic analyses.

Classification

Bacteria » *Chloroflexota* » *Tepidiformia* » *Tepidiformales* » *Tepidiformaceae* » *Amarobacillus* » *Amarobacillus elongatus*^{Ts}

References

Effective publication: Petriglieri et al., 2023 [1]
Assigned taxonomically: Petriglieri et al., 2023 [1]

Registry URL

<https://seqco.de/i:44012>

Species *Villigracilis adiacens*

Etymology

[a.di.a'cens] L. masc. part. adj. *adiacens*, close

Nomenclatural type

[NCBI Assembly: GCA_016703605.1](#)^{Ts}

Description

The species is established on the same basis as the genus and the type material is the genome Aved_BAT3C.518. Fluorescence in situ hybridization with genus-specific FISH probes shows filamentous morphology (12-50 × 0.3-0.4 μm).

Classification

Bacteria » *Chloroflexota* » *Anaerolineae* » *Anaerolineales* » *Villigracilaceae* » *Villigracilis* » *Villigracilis adiacens*

References

Effective publication: Petriglieri et al., 2023 [1]
Assigned taxonomically: Petriglieri et al., 2023 [1]

Registry URL

<https://seqco.de/i:43978>

Species *Leptofilum gracile*^{Ts}

Etymology

[gra.ci'le] L. neut. adj. *gracile*, thin

Nomenclatural type

[NCBI Assembly: GCA_016713825.1](#)^{Ts}

Description

The species is established on the same basis as the genus and the type material is the genome Fred_BAT3C.445. Fluorescence in situ hybridization with genus-specific FISH probes shows filamentous morphology (10-70 × 0.7-0.9 μm).

Classification

Bacteria » *Chloroflexota* » *Anaerolineae* » *Promineifilales* » *Promineifilaceae* » *Leptofilum* » *Leptofilum gracile*^{Ts}

References

Effective publication: Petriglieri et al., 2023 [1]
Assigned taxonomically: Petriglieri et al., 2023 [1]

Registry URL

<https://seqco.de/i:43989>

Species *Leptovillus gracilis*^{Ts}

Etymology

[gra.ci'lis] L. masc. adj. *gracilis*, slender

Nomenclatural type

[NCBI Assembly: GCA_016716065.1](#)^{Ts}

Description

The species is established on the same basis as the genus and the type material is the genome Kalu_BATAC.47. Fluorescence in situ hybridization with genus-specific FISH probes shows filamentous morphology (10-70 × 0.7-0.9 μm).

Classification

Bacteria » *Chloroflexota* » *Anaerolineae* » *Promineifilales* » *Promineifilaceae* » *Leptovillus* » *Leptovillus gracilis*^{Ts}

References

Effective publication: Petriglieri et al., 2023 [1]
Assigned taxonomically: Petriglieri et al., 2023 [1]

Registry URL

<https://seqco.de/i:43992>

Species *Promineifilum glycogenicum*

Etymology

[gly.co.ge.ni'cum] N.L. neut. adj. *glycogenicum*, indicating the presence of intracellular glycogen

Nomenclatural type

[NCBI Assembly: GCA_016707605.1](#)^{Ts}

Description

The species is established on the same basis as the genus and the type material is the genome Ega_BAT3C.159. Fluorescence in situ hybridization with genus-specific FISH probes shows filamentous morphology (20-140 × 0.8 µm).

Classification

Bacteria » *Chloroflexota* » *Anaerolineae* » *Promineifilales* » *Promineifilaceae* » *Promineifilum* » *Promineifilum glycogenicum*

References

Effective publication: Petriglieri et al., 2023 [1]

Registry URL

<https://seqco.de/i:43987>

References

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3. Andersen et al. (2019). Genomic insights into Candidatus Amarolinea aalborgensis gen. nov., sp. nov., associated with settleability problems in wastewater treatment plants. *Systematic and Applied Microbiology*. [DOI:10.1016/j.syapm.2018.08.001](https://doi.org/10.1016/j.syapm.2018.08.001)

Register List Certificate of Validation

On behalf of the *Committee on the Systematics of Prokaryotes Described from Sequence Data* (SeqCode Committee), we hereby certify that the Register List seqco.de/r:82uy5hy3 submitted by Petriglieri, Francesca and including 47 new names has been successfully validated.

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