

Taxonomic Outline of the Bacteria and Archaea, Release 7.7 March 6, 2007.

**Part 2 – The Bacteria: Phyla “Aquificae”, “Thermotogae”,
“Thermodesulfobacteria”, Deinococcus-Thermus, “Chrysiogenetes”,
“Chloroflexi”, “Thermomicrobia”, “Nitrospira”, “Deferre bacteres”,
“Cyanobacteria”, and “Chlorobi”.**

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Domain *Bacteria*^{AL} Haeckel 1894. N4Lid DOI: 10.1601/nm.419

Phylum “*Aquificae*” Reysenbach 2001. N4Lid DOI: 10.1601/nm.420

Class “*Aquificae*” N4Lid DOI: 10.1601/nm.421

Order *Aquificales*^{VP} Reysenbach 2002. N4Lid DOI: 10.1601/nm.422

Family *Aquificaceae*^{VP} Reysenbach 2002. N4Lid DOI: 10.1601/nm.423

Genus *Aquifex*^{VP} Huber and Stetter 1992. N4Lid DOI: 10.1601/nm.424

Aquifex pyrophilus^{VP} Huber and Stetter 1992. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 6858. High-quality 16S rRNA sequence S000436807 (RDP), M83548 (Genbank). N4Lid DOI: 10.1601/nm.425

Genus *Hydrogenivirga*^{VP} Nakagawa et al. 2004. GOLD ID: Gi01416. GCAT ID: 000880_GCAT. Sequenced strain: 128-5 is from a non-type strain. Genome sequencing is incomplete. Number of genomes of this species sequenced 1 (GOLD). N4Lid 10.1601/nm.8620

Hydrogenivirga caldilitoris^{VP} Nakagawa et al. 2004. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC BAA-821. High-quality 16S rRNA sequence S000439514 (RDP), AB120294 (Genbank). N4Lid 10.1601/nm.8621

Genus *Hydrogenobaculum*^{VP} Stöhr et al. 2001. N4Lid DOI: 10.1601/nm.428

Hydrogenobaculum acidophilum^{VP} (Shima and Suzuki 1993) Stöhr et al. 2001. <==
Hydrogenobacter acidophilus (basonym). Synonym links through N4Lid: 10.1601/ex.432. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 700507. High-quality 16S rRNA sequence S000413574 (RDP), D16296 (Genbank). N4Lid DOI: 10.1601/nm.429

† *Hydrogenobacter acidophilus*^{VP} Shima and Suzuki 1993. ==> *Hydrogenobaculum acidophilum* (new combination). Synonym links through N4Lid: 10.1601/ex.432. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 700507. High-quality 16S rRNA sequence S000413574 (RDP), D16296 (Genbank). N4Lid DOI: 10.1601/nm.432

Genus *Hydrogenobacter*^{VP} Kawasumi et al. 1984. ≈ *Hydrogenobacter* (later heterotypic synonym), links through 10.1601/nm.430. N4Lid DOI: 10.1601/nm.430

Hydrogenobacter thermophilus^{VP} Kawasumi et al. 1984. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 6534. High-quality 16S rRNA sequence S000128270 (RDP), Z30214 (Genbank). N4Lid DOI: 10.1601/nm.431

Hydrogenobacter hydrogenophilus^{VP} (Kryukov et al. 1984) Stöhr et al. 2001. <==
Calderobacterium hydrogenophilum (basonym). Synonym links through N4Lid: 10.1601/ex.427. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC BAA-479. High-quality 16S rRNA sequence S000129305 (RDP), Z30242 (Genbank). N4Lid DOI: 10.1601/nm.433

† *Calderobacterium hydrogenophilum*^{VP} Kryukov et al. 1984. ==> *Hydrogenobacter hydrogenophilus* (new combination). Synonym links through N4Lid: 10.1601/ex.427. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC BAA-479. High-quality 16S rRNA sequence S000129305 (RDP), Z30242 (Genbank). N4Lid DOI: 10.1601/nm.427

Hydrogenobacter subterraneus^{VP} Takai et al. 2001. Source of type material recommended for DOE sponsored genome sequencing by the JGI: IFO 16485. High-quality 16S rRNA sequence S000021414 (RDP), AB026268 (Genbank). N4Lid DOI: 10.1601/nm.434

Genus † *Calderobacterium*^{VP} Kryukov et al. 1984. ≈ *Hydrogenobacter* (earlier heterotypic synonym), links through 10.1601/nm.430. N4Lid DOI: 10.1601/nm.426

Genus *Hydrogenothermus* ^{VP} Stöhr et al. 2001. N4Lid DOI: 10.1601/nm.435

Hydrogenothermus marinus ^{VP} Stöhr et al. 2001. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC BAA-483. N4Lid DOI: 10.1601/nm.436

Genus *Persephonella* ^{VP} Götz et al. 2002. N4Lid DOI: 10.1601/nm.437

Persephonella marina ^{VP} Götz et al. 2002. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 49756. High-quality 16S rRNA sequence S000388827 (RDP), AF188332 (Genbank). GOLD ID: Gi00443. GCAT ID: 001355_GCAT. Entrez genome id: 12526. Sequenced strain: EX-H1 is type material. Genome sequencing is incomplete. Number of genomes of this species sequenced 2 (GOLD) 1 (NCBI). N4Lid DOI: 10.1601/nm.438

Persephonella guaymasensis ^{VP} Götz et al. 2002. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 14351. High-quality 16S rRNA sequence S000392845 (RDP), AF385630 (Genbank). N4Lid DOI: 10.1601/nm.439

Persephonella hydrogeniphila ^{VP} Nakagawa et al. 2003. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 15103. High-quality 16S rRNA sequence S000133633 (RDP), AB086419 (Genbank). N4Lid DOI: 10.1601/nm.440

Genus *Sulfurihydrogenibium* ^{VP} Takai et al. 2003. N4Lid DOI: 10.1601/nm.441

Sulfurihydrogenibium subterraneum ^{VP} Takai et al. 2003. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC BAA-562. High-quality 16S rRNA sequence S000018330 (RDP), AB071324 (Genbank). N4Lid DOI: 10.1601/nm.442

Sulfurihydrogenibium azorensis ^{VP} Aguiar et al. 2004. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 15241. High-quality 16S rRNA sequence S000431601 (RDP), AF528192 (Genbank). GOLD ID: Gi00634. GCAT ID: 001581_GCAT. Entrez genome id: 12529. Sequenced strain: Az-Fu is from a non-type strain. Genome sequencing is incomplete. Number of genomes of this species sequenced 1 (GOLD) 1 (NCBI). N4Lid DOI: 10.1601/nm.443

Sulfurihydrogenibium yellowstonense ^{VP} Nakagawa et al. 2005. Source of type material recommended for DOE sponsored genome sequencing by the JGI: JCM 12773. High-quality 16S rRNA sequence S000574761 (RDP), AY686713 (Genbank). GOLD ID: Gi01128. GCAT ID: 001582_GCAT. Sequenced strain: JCM 12773 is type material. Genome sequencing is incomplete. Number of genomes of this species sequenced 1 (GOLD). N4Lid 10.1601/nm.9748

Genus *Thermocrinis* ^{VP} Huber et al. 1999. N4Lid DOI: 10.1601/nm.444

Thermocrinis ruber ^{VP} Huber et al. 1999. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 12173. High-quality 16S rRNA sequence S000129981 (RDP), AJ005640 (Genbank). N4Lid DOI: 10.1601/nm.445

Thermocrinis albus ^{VP} Eder and Huber et al. 2002. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 14484. High-quality 16S rRNA sequence S000104195 (RDP), AJ278895 (Genbank). N4Lid DOI: 10.1601/nm.446

Family *Incertae sedis* 2 ^{NVP} N4Lid DOI: 10.1601/nm.447

Genus *Balnearium* ^{VP} Takai et al. 2003. N4Lid DOI: 10.1601/nm.448

Balnearium lithotrophicum ^{VP} Takai et al. 2003. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC BAA-736. High-quality 16S rRNA sequence S000263334 (RDP), AB105049 (Genbank). N4Lid DOI: 10.1601/nm.449

Genus *Desulfurobacterium* ^{VP} L'Haridon et al. 1998. N4Lid DOI: 10.1601/nm.450

Desulfurobacterium thermolithotrophum ^{VP} L'Haridon et al. 1998. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 11699. High-quality 16S rRNA sequence S000128259 (RDP), AJ001049 (Genbank). N4Lid DOI: 10.1601/nm.451

Genus *Thermovibrio* ^{VP} Huber et al. 2002. N4Lid DOI: 10.1601/nm.452

Thermovibrio ruber ^{VP} Huber et al. 2002. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 14644. High-quality 16S rRNA sequence S000351477 (RDP), AJ316619 (Genbank). N4Lid DOI: 10.1601/nm.453

Thermovibrio ammonificans ^{VP} Vetriani et al. 2004. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 15698. High-quality 16S rRNA sequence S000404896 (RDP), AY263403 (Genbank). N4Lid DOI: 10.1601/nm.454

Phylum "Thermotogae" N4Lid DOI: 10.1601/nm.455

Class *Thermotogae*^{VP} Reysenbach 2001. N4Lid DOI: 10.1601/nm.456

Order *Thermotogales*^{VP} Reysenbach 2002. N4Lid DOI: 10.1601/nm.457

Family *Thermotogaceae*^{VP} Reysenbach 2002. N4Lid DOI: 10.1601/nm.458

Genus *Thermotoga*^{VP} Stetter and Huber 1986. N4Lid DOI: 10.1601/nm.459

Thermotoga maritima^{VP} Stetter and Huber 1986. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 43589. High-quality 16S rRNA sequence S000436057 (RDP), M21774 (Genbank). GOLD ID: Gc00023. GCAT ID: 000587_GCAT. Entrez genome id: 111. Sequenced strain: ATCC 43589 is type material. Genome sequencing is completed. Number of genomes of this species sequenced 1 (GOLD) 1 (NCBI). N4Lid DOI: 10.1601/nm.460

Thermotoga elfii^{VP} Ravot et al. 1995. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 51869. High-quality 16S rRNA sequence S000004399 (RDP), X80790 (Genbank). N4Lid DOI: 10.1601/nm.461

Thermotoga hypogea^{VP} Fardeau et al. 1997. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 11164. High-quality 16S rRNA sequence S000438744 (RDP), U89768 (Genbank). N4Lid DOI: 10.1601/nm.462

Thermotoga lettingae^{VP} Balk et al. 2002. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC BAA-301. High-quality 16S rRNA sequence S000392200 (RDP), AF355615 (Genbank). GOLD ID: Gi01044. GCAT ID: 001609_GCAT. Entrez genome id: 15644. Sequenced strain: TMOT is from a non-type strain. Genome sequencing is incomplete. Number of genomes of this species sequenced 1 (GOLD) 1 (NCBI). N4Lid DOI: 10.1601/nm.463

Thermotoga naphthophila^{VP} Takahata et al. 2001. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC BAA-489. High-quality 16S rRNA sequence S000382805 (RDP), AB027017 (Genbank). N4Lid DOI: 10.1601/nm.464

Thermotoga neapolitana^{VP} Jannasch et al. 1989. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 49049. High-quality 16S rRNA sequence S000383207 (RDP), AB039768 (Genbank). GOLD ID: Gi00657. GCAT ID: 001607_GCAT. Entrez genome id: 12534. Sequenced strain: DSM 4359 is type material. Genome sequencing is incomplete. Number of genomes of this species sequenced 1 (GOLD) 1 (NCBI). N4Lid DOI: 10.1601/nm.465

Thermotoga petrophila^{VP} Takahata et al. 2001. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC BAA-488. High-quality 16S rRNA sequence S000010700 (RDP), AB027016 (Genbank). GOLD ID: Gi01043. GCAT ID: 001608_GCAT. Entrez genome id: 17089. Sequenced strain: RKU-1 is type material. Genome sequencing is incomplete. Number of genomes of this species sequenced 1 (GOLD) 1 (NCBI). N4Lid DOI: 10.1601/nm.466

Thermotoga subterranea^{VP} Jeanthon et al. 2000. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 9912. High-quality 16S rRNA sequence S000437280 (RDP), U22664 (Genbank). N4Lid DOI: 10.1601/nm.467

Thermotoga thermarum^{VP} Windberger et al. 1992. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 5069. High-quality 16S rRNA sequence S000383208 (RDP), AB039769 (Genbank). N4Lid DOI: 10.1601/nm.468

Genus *Fervidobacterium*^{VP} Patel et al. 1985. N4Lid DOI: 10.1601/nm.469

Fervidobacterium gondwanense^{VP} Andrews and Patel 1996. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 13020. High-quality 16S rRNA sequence S000001985 (RDP), Z49117 (Genbank). N4Lid DOI: 10.1601/nm.470

Fervidobacterium islandicum^{VP} Huber et al. 1991. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 49647. High-quality 16S rRNA sequence S000436525 (RDP), M59176 (Genbank). N4Lid DOI: 10.1601/nm.471

Fervidobacterium nodosum^{VP} Patel et al. 1985. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 35602. High-quality 16S rRNA sequence S000007611 (RDP), M59177 (Genbank). GOLD ID: Gi01012. GCAT ID: 001054_GCAT. Entrez genome id: 16719. Sequenced strain: RT17-B1 is from a non-type strain. Genome sequencing is

incomplete. Number of genomes of this species sequenced 1 (GOLD) 1 (NCBI). N4Lid DOI: 10.1601/nm.472

Fervidobacterium pennivorans^{VP} corrig. Friedrich and Antranikian 1999. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 9078. N4Lid DOI: 10.1601/nm.473

Genus *Geotoga*^{VP} Davey et al. 1993. N4Lid DOI: 10.1601/nm.474

Geotoga petraea^{VP} Davey et al. 1993. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 51226. High-quality 16S rRNA sequence S000414371 (RDP), L10658 (Genbank). N4Lid DOI: 10.1601/nm.475

Geotoga subterranea^{VP} Davey et al. 1993. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 51225. High-quality 16S rRNA sequence S000414372 (RDP), L10659 (Genbank). N4Lid DOI: 10.1601/nm.476

Genus *Marinitoga*^{VP} Wery et al. 2001. N4Lid DOI: 10.1601/nm.477

Marinitoga camini^{VP} Wery et al. 2001. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 13578. High-quality 16S rRNA sequence S000004844 (RDP), AJ250439 (Genbank). GOLD ID: Gi01018. GCAT ID: 001203_GCAT. Entrez genome id: 15680. Sequenced strain: MV1075 is type material. Genome sequencing is incomplete. Number of genomes of this species sequenced 1 (GOLD) 1 (NCBI). N4Lid DOI: 10.1601/nm.478

Marinitoga hydrogenitolerans^{VP} Postec et al. 2005. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 16785. High-quality 16S rRNA sequence S000539628 (RDP), AJ786363 (Genbank). N4Lid 10.1601/nm.9464

Marinitoga piezophila^{VP} Alain et al. 2002. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 14283. High-quality 16S rRNA sequence S000391620 (RDP), AF326121 (Genbank). GOLD ID: Gi01419. GCAT ID: 000883_GCAT. Sequenced strain: DSM 14283 is type material. Genome sequencing is incomplete. Number of genomes of this species sequenced 1 (GOLD). N4Lid DOI: 10.1601/nm.479

Genus *Petrotoga*^{VP} Davey et al. 1993. N4Lid DOI: 10.1601/nm.480

Petrotoga miotherma^{VP} Davey et al. 1993. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 51224. High-quality 16S rRNA sequence S000414370 (RDP), L10657 (Genbank). GOLD ID: Gi00445. GCAT ID: 001357_GCAT. Entrez genome id: 13340. Sequenced strain: ATCC 51224 is type material. Genome sequencing is incomplete. Number of genomes of this species sequenced 1 (GOLD) 1 (NCBI). N4Lid DOI: 10.1601/nm.481

Petrotoga mexicana^{VP} Miranda-Tello et al. 2004. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 14811. High-quality 16S rRNA sequence S000396590 (RDP), AY125964 (Genbank). N4Lid DOI: 10.1601/nm.482

Petrotoga mobilis^{VP} Lien et al. 1998. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 10674. High-quality 16S rRNA sequence S000015010 (RDP), Y15479 (Genbank). GOLD ID: Gi01028. GCAT ID: 001358_GCAT. Entrez genome id: 15640. Sequenced strain: SJ95t is from a non-type strain. Genome sequencing is incomplete. Number of genomes of this species sequenced 1 (GOLD) 1 (NCBI). N4Lid DOI: 10.1601/nm.483

Petrotoga olearia^{VP} L'Haridon et al. 2002. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 13574. High-quality 16S rRNA sequence S000010535 (RDP), AJ311703 (Genbank). N4Lid DOI: 10.1601/nm.484

Petrotoga sibirica^{VP} L'Haridon et al. 2002. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 13575. High-quality 16S rRNA sequence S000002133 (RDP), AJ311702 (Genbank). N4Lid DOI: 10.1601/nm.485

Genus *Thermosipho*^{VP} Huber et al. 1989. N4Lid DOI: 10.1601/nm.486

Thermosipho africanus^{VP} Huber et al. 1989. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 5309. High-quality 16S rRNA sequence S000010674 (RDP), M83140 (Genbank). GOLD ID: Gi01046. GCAT ID: 001611_GCAT. Sequenced strain: TBA5 is from a non-type strain. Genome sequencing is incomplete. Number of genomes of this species sequenced 1 (GOLD). N4Lid DOI: 10.1601/nm.487

Thermosipho atlanticus^{VP} Urios et al. 2004. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 15807. High-quality 16S rRNA sequence S000440162 (RDP), AJ577471 (Genbank). N4Lid 10.1601/nm.8947

Thermosipho geolei^{VP} L'Haridon et al. 2001. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 13256. High-quality 16S rRNA sequence S000002167 (RDP), AJ272022 (Genbank). N4Lid DOI: 10.1601/nm.488

Thermosipho japonicus^{VP} Takai and Horikoshi 2000. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 13481. High-quality 16S rRNA sequence S000382726 (RDP), AB024932 (Genbank). N4Lid DOI: 10.1601/nm.489

Thermosipho melanesiensis^{VP} Antoine et al. 1997. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 12029. High-quality 16S rRNA sequence S000017523 (RDP), Z70248 (Genbank). GOLD ID: Gi01045. GCAT ID: 001610_GCAT. Entrez genome id: 17249. Sequenced strain: BI429 is type material. Genome sequencing is incomplete. Number of genomes of this species sequenced 1 (GOLD) 1 (NCBI). N4Lid DOI: 10.1601/nm.490

Phylum "Thermodesulfobacteria" N4Lid DOI: 10.1601/nm.491

Class Thermodesulfobacteria^{VP} Garrity and Holt 2001. N4Lid DOI: 10.1601/nm.492

Order Thermodesulfobacteriales^{VP} Hatchikian et al 2002. N4Lid DOI: 10.1601/nm.493

Family Thermodesulfobacteriaceae^{VP} Hatchikian et al 2002. N4Lid DOI: 10.1601/nm.494

Genus Thermodesulfobacterium^{VP} Zeikus et al. 1995. N4Lid DOI: 10.1601/nm.495

Thermodesulfobacterium commune^{VP} Zeikus et al. 1995. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 33708. High-quality 16S rRNA sequence S000414373 (RDP), L10662 (Genbank). GOLD ID: Gi00737. GCAT ID: 001603_GCAT. Entrez genome id: 12531. Sequenced strain: DSM 2178 is type material. Genome sequencing is incomplete. Number of genomes of this species sequenced 1 (GOLD) 1 (NCBI). N4Lid DOI: 10.1601/nm.496

Thermodesulfobacterium hydrogeniphilum^{VP} Jeanthon et al. 2002. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 14290. High-quality 16S rRNA sequence S000391738 (RDP), AF332514 (Genbank). N4Lid DOI: 10.1601/nm.497

Thermodesulfobacterium hveragerdense^{VP} Sonne-Hansen and Ahring 2000. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 12571. High-quality 16S rRNA sequence S000010882 (RDP), X96725 (Genbank). N4Lid DOI: 10.1601/nm.498

Thermodesulfobacterium thermophilum^{VP} (Rozanova and Khudyakova 1974) Rozanova and Pivovarova 1995. <=> *Desulfovibrio thermophilus* (basonym). Synonym links through N4Lid: 10.1601/ex.3506. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 1276. High-quality 16S rRNA sequence S000391786 (RDP), AF334601 (Genbank). N4Lid DOI: 10.1601/nm.500

† *Desulfovibrio thermophilus*^{AL} Rozanova and Khudyakova 1974. ==>

Thermodesulfobacterium thermophilum (new combination). Synonym links through N4Lid: 10.1601/ex.3506. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 1276. High-quality 16S rRNA sequence S000391786 (RDP), AF334601 (Genbank). N4Lid DOI: 10.1601/nm.3506

† *Thermodesulfobacterium mobile*^{VP} Zeikus et al. 1995. *Desulfovibrio thermophilus* (illegitimate name), links through 10.1601./<link>. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 1276. High-quality 16S rRNA sequence S000391786 (RDP), AF334601 (Genbank). N4Lid DOI: 10.1601/nm.499

Genus Thermodesulfatator^{VP} Moussard et al. 2004. N4Lid DOI: 10.1601/nm.501

Thermodesulfatator indicus^{VP} Moussard et al. 2004. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 15286. High-quality 16S rRNA sequence S000392915 (RDP), AF393376 (Genbank). N4Lid DOI: 10.1601/nm.502

Phylum Deinococcus-Thermus^{NVP} N4Lid DOI: 10.1601/nm.503

Class Deinococci^{VP} Garrity and Holt 2002. N4Lid DOI: 10.1601/nm.504

Order Deinococcales^{VP} Rainey et al 1997. N4Lid DOI: 10.1601/nm.505

Family Deinococcaceae^{VP} Brooks and Murray 1981. N4Lid DOI: 10.1601/nm.506

Genus Deinococcus^{VP} Brooks and Murray 1981. ≈ *Deinococcus* (later heterotypic synonym), links through 10.1601./nm.507. N4Lid DOI: 10.1601/nm.507

Deinococcus radiodurans^{VP} (ex Raj et al. 1960) Brooks and Murray 1981. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 13939. High-

quality 16S rRNA sequence S000009620 (RDP), Y11332 (Genbank). GOLD ID: Gc00024. GCAT ID: 000586_GCAT. Entrez genome id: 65. Sequenced strain: ATCC BAA-816 is from a non-type strain. Genome sequencing is completed. Number of genomes of this species sequenced 1 (GOLD) 1 (NCBI). N4Lid DOI: 10.1601/nm.508

Deinococcus apachensis^{VP} Rainey and da Costa 2005. Source of type material recommended for DOE sponsored genome sequencing by the JGI: NRRL B-23948. High-quality 16S rRNA sequence S000595386 (RDP), AY743264 (Genbank). N4Lid 10.1601/nm.9674

Deinococcus deserti^{VP} de Groot et al. 2005. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 17065. High-quality 16S rRNA sequence S000481081 (RDP), AY876378 (Genbank). GOLD ID: Gi01514. GCAT ID: 000994_GCAT. Entrez genome id: 16691. Sequenced strain: DSM 17065 is type material. Genome sequencing is incomplete. Number of genomes of this species sequenced 1 (GOLD) 1 (NCBI). N4Lid 10.1601/nm.9756

Deinococcus ficus^{VP} Lai et al. 2006. Source of type material recommended for DOE sponsored genome sequencing by the JGI: CCUG 51391. High-quality 16S rRNA sequence S000541101 (RDP), AY941086 (Genbank). N4Lid DOI: 10.1601/nm.10011

Deinococcus frigens^{VP} Hirsch et al. 2006. Source of type material recommended for DOE sponsored genome sequencing by the JGI: NRRL B-41046. High-quality 16S rRNA sequence S000247785 (RDP), AJ585981 (Genbank). N4Lid DOI: 10.1601/nm.10072

Deinococcus geothermalis^{VP} Ferreira et al. 1997. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 11300. High-quality 16S rRNA sequence S000003901 (RDP), Y13038 (Genbank). GOLD ID: Gc00381. GCAT ID: 000229_GCAT. Entrez genome id: 13423. Sequenced strain: DSM 11300 is type material. Genome sequencing is completed. Number of genomes of this species sequenced 1 (GOLD) 1 (NCBI). N4Lid DOI: 10.1601/nm.510

Deinococcus grandis^{VP} (Oyaizu et al. 1987) Rainey et al. 1997. <== *Deinobacter grandis* (basonym). Synonym links through N4Lid: 10.1601/ex.511. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 43672. High-quality 16S rRNA sequence S000000227 (RDP), Y11329 (Genbank). N4Lid DOI: 10.1601/nm.511

† *Deinobacter grandis*^{VP} Oyaizu et al. 1987. ==> *Deinococcus grandis* (new combination). Synonym links through N4Lid: 10.1601/ex.511. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 43672. High-quality 16S rRNA sequence S000000227 (RDP), Y11329 (Genbank). N4Lid 10.1601/nm.9146

Deinococcus hohokamensis^{VP} Rainey and da Costa 2005. Source of type material recommended for DOE sponsored genome sequencing by the JGI: NRRL B-23949. High-quality 16S rRNA sequence S000595378 (RDP), AY743256 (Genbank). N4Lid 10.1601/nm.9675

Deinococcus hopiensis^{VP} Rainey and da Costa 2005. Source of type material recommended for DOE sponsored genome sequencing by the JGI: NRRL B-23943. High-quality 16S rRNA sequence S000595384 (RDP), AY743262 (Genbank). N4Lid 10.1601/nm.9676

Deinococcus indicus^{VP} Suresh et al. 2004. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 15307. High-quality 16S rRNA sequence S000276452 (RDP), AJ549111 (Genbank). N4Lid DOI: 10.1601/nm.512

Deinococcus marmoris^{VP} Hirsch et al. 2006. Source of type material recommended for DOE sponsored genome sequencing by the JGI: NRRL B-41042. High-quality 16S rRNA sequence S000247788 (RDP), AJ585986 (Genbank). N4Lid DOI: 10.1601/nm.10073

Deinococcus maricopensis^{VP} Rainey and da Costa 2005. Source of type material recommended for DOE sponsored genome sequencing by the JGI: NRRL B-23946. High-quality 16S rRNA sequence S000595396 (RDP), AY743274 (Genbank). N4Lid 10.1601/nm.9677

Deinococcus mumbaiensis^{VP} Shashidhar and Bandekar 2006. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 17424. High-quality 16S rRNA sequence S000541383 (RDP), DQ003135 (Genbank). N4Lid DOI: 10.1601/nm.10074

Deinococcus murrayi^{VP} Ferreira et al. 1997. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 11303. High-quality 16S rRNA sequence S000000418 (RDP), Y13041 (Genbank). N4Lid DOI: 10.1601/nm.513

Deinococcus navajonensis^{VP} Rainey and da Costa 2005. Source of type material recommended for DOE sponsored genome sequencing by the JGI: NRRL B-23951. High-quality 16S rRNA sequence S000595381 (RDP), AY743259 (Genbank). N4Lid 10.1601/nm.9678

Deinococcus papagonensis^{VP} Rainey and da Costa 2005. Source of type material recommended for DOE sponsored genome sequencing by the JGI: NRRL B-23961. High-quality 16S rRNA sequence S000595402 (RDP), AY743280 (Genbank). N4Lid 10.1601/nm.9679

Deinococcus pimensis^{VP} Rainey and da Costa 2005. Source of type material recommended for DOE sponsored genome sequencing by the JGI: NRRL B-23994. High-quality 16S rRNA sequence S000595399 (RDP), AY743277 (Genbank). N4Lid 10.1601/nm.9680

Deinococcus proteolyticus^{VP} Brooks and Murray 1981. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 35074. High-quality 16S rRNA sequence S000022313 (RDP), Y11331 (Genbank). N4Lid DOI: 10.1601/nm.514

Deinococcus radiophilus^{VP} (ex Lewis 1973) Brooks and Murray 1981. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 27603. High-quality 16S rRNA sequence S000008497 (RDP), Y11333 (Genbank). N4Lid DOI: 10.1601/nm.515

Deinococcus radiopugnans^{VP} Brooks and Murray 1981. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 19172. High-quality 16S rRNA sequence S000009621 (RDP), Y11334 (Genbank). N4Lid DOI: 10.1601/nm.516

Deinococcus saxicola^{VP} Hirsch et al. 2006. Source of type material recommended for DOE sponsored genome sequencing by the JGI: NRRL B-41043. High-quality 16S rRNA sequence S000247787 (RDP), AJ585984 (Genbank). N4Lid DOI: 10.1601/nm.10075

Deinococcus sonorensis^{VP} Rainey and da Costa 2005. Source of type material recommended for DOE sponsored genome sequencing by the JGI: NRRL B-23941. High-quality 16S rRNA sequence S000595405 (RDP), AY743283 (Genbank). N4Lid 10.1601/nm.9681

Deinococcus yavapaiensis^{VP} Rainey and da Costa 2005. Source of type material recommended for DOE sponsored genome sequencing by the JGI: NRRL B-23960. High-quality 16S rRNA sequence S000595401 (RDP), AY743279 (Genbank). N4Lid 10.1601/nm.9682

Genus † *Deinobacter*^{VP} Oyaizu et al. 1987. ≈ *Deinococcus* (earlier heterotypic synonym), links through 10.1601/nm.507. N4Lid 10.1601/nm.9142

Family *Trueperaceae*^{VP} Rainey et al 2005. N4Lid DOI: 10.1601/nm.10329

Genus *Truepera*^{VP} da Costa et al. 2005. N4Lid 10.1601/nm.9669

Truepera radiovictrix^{VP} Albuquerque et al. 2005. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 17093. High-quality 16S rRNA sequence S000537030 (RDP), DQ022076 (Genbank). N4Lid 10.1601/nm.9668

Order *Thermales*^{VP} Rainey and Da Costa 2002. N4Lid DOI: 10.1601/nm.517

Family *Thermaceae*^{VP} Da Costa and Rainey 2002. N4Lid DOI: 10.1601/nm.518

Genus *Thermus*^{AL} Brock and Freeze 1969. N4Lid DOI: 10.1601/nm.519

Thermus aquaticus^{AL} Brock and Freeze 1969. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 25104. High-quality 16S rRNA sequence S000013729 (RDP), L09663 (Genbank). N4Lid DOI: 10.1601/nm.520

Thermus antranikianii^{VP} Chung et al. 2000. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 700961. High-quality 16S rRNA sequence S000019653 (RDP), Y18411 (Genbank). N4Lid DOI: 10.1601/nm.521

Thermus brockianus^{VP} Williams et al. 1995. Source of type material recommended for DOE sponsored genome sequencing by the JGI: JCM 11602. N4Lid DOI: 10.1601/nm.522

Thermus filiformis^{VP} Hudson et al. 1987. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 43280. High-quality 16S rRNA sequence S000022037 (RDP), L09667 (Genbank). N4Lid DOI: 10.1601/nm.524

Thermus igniterrae^{VP} Chung et al. 2000. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 700962. High-quality 16S rRNA sequence S000020770 (RDP), Y18406 (Genbank). N4Lid DOI: 10.1601/nm.525

Thermus oshimai^{VP} Williams et al. 1996. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 700435. High-quality 16S rRNA sequence S000000264 (RDP), Y18416 (Genbank). N4Lid DOI: 10.1601/nm.526

Thermus scotoductus^{VP} Kristjansson et al. 1994. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 51532. High-quality 16S rRNA sequence S000427881 (RDP), AF032127 (Genbank). N4Lid DOI: 10.1601/nm.528

Thermus thermophilus^{VP} (ex Oshima and Imahori 1974) Manaia et al. 1995. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 27634. High-quality 16S rRNA sequence S000436153 (RDP), M26923 (Genbank). GOLD ID: Gc00182. GCAT ID: 000428_GCAT. Entrez genome id: 10617. Sequenced strain: ATCC 27634 is type material. Genome sequencing is completed. Number of genomes of this species sequenced 3 (GOLD) 2 (NCBI). N4Lid DOI: 10.1601/nm.530

Genus *Marinithermus*^{VP} Sako et al. 2003. N4Lid DOI: 10.1601/nm.531

Marinithermus hydrothermalis^{VP} Sako et al. 2003. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 14884. High-quality 16S rRNA sequence S000384787 (RDP), AB079382 (Genbank). N4Lid DOI: 10.1601/nm.532

Genus *Meiothermus*^{VP} Nobre et al. 1996. N4Lid DOI: 10.1601/nm.533

Meiothermus ruber^{VP} (Loginova et al. 1984) Nobre et al. 1996. <== *Thermus ruber* (basonym). Synonym links through N4Lid: 10.1601/ex.527. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 35948. High-quality 16S rRNA sequence S000019098 (RDP), Z15059 (Genbank). N4Lid DOI: 10.1601/nm.534

† *Thermus ruber*^{VP} (ex Loginova et al. 1975) Loginova et al. 1984. ==> *Meiothermus ruber* (new combination). Synonym links through N4Lid: 10.1601/ex.527. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 35948. High-quality 16S rRNA sequence S000019098 (RDP), Z15059 (Genbank). N4Lid DOI: 10.1601/nm.527

Meiothermus cerbereus^{VP} Chung et al. 1997. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 11376. High-quality 16S rRNA sequence S000013910 (RDP), Y13594 (Genbank). N4Lid DOI: 10.1601/nm.535

Meiothermus chliarophilus^{VP} (Tenreiro et al. 1995) Nobre et al. 1996. <== *Thermus chliarophilus* (basonym). Synonym links through N4Lid: 10.1601/ex.523. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 700543. High-quality 16S rRNA sequence S000019095 (RDP), X84212 (Genbank). N4Lid DOI: 10.1601/nm.536

† *Thermus chliarophilus*^{VP} Tenreiro et al. 1995. ==> *Meiothermus chliarophilus* (new combination). Synonym links through N4Lid: 10.1601/ex.523. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 700543. High-quality 16S rRNA sequence S000019095 (RDP), X84212 (Genbank). N4Lid DOI: 10.1601/nm.523

Meiothermus silvanus^{VP} (Tenreiro et al. 1995) Nobre et al. 1996. <== *Thermus silvanus* (basonym). Synonym links through N4Lid: 10.1601/ex.529. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 700542. High-quality 16S rRNA sequence S000019099 (RDP), X84211 (Genbank). N4Lid DOI: 10.1601/nm.537

† *Thermus silvanus*^{VP} Tenreiro et al. 1995. ==> *Meiothermus silvanus* (new combination). Synonym links through N4Lid: 10.1601/ex.529. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 700542. High-quality 16S rRNA sequence S000019099 (RDP), X84211 (Genbank). N4Lid DOI: 10.1601/nm.529

Meiothermus taiwanensis^{VP} Chen et al. 2002. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC BAA-399. High-quality 16S rRNA sequence S000393846 (RDP), AF418001 (Genbank). N4Lid DOI: 10.1601/nm.538

Meiothermus timidus^{VP} Pires et al. 2005. Source of type material recommended for DOE sponsored genome sequencing by the JGI: CIP 108604. High-quality 16S rRNA sequence S000539695 (RDP), AJ871168 (Genbank). N4Lid DOI: 10.1601/nm.9478

Genus *Oceanithermus*^{VP} Miroshnichenko et al. 2003. N4Lid DOI: 10.1601/nm.539

Oceanithermus profundus^{VP} Miroshnichenko et al. 2003. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 14977. High-quality 16S rRNA sequence S000134123 (RDP), AJ430586 (Genbank). N4Lid DOI: 10.1601/nm.540

Oceanithermus desulfurans^{VP} Mori et al. 2004. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 15757. High-quality 16S rRNA sequence S000415043 (RDP), AB107956 (Genbank). N4Lid DOI: 10.1601/nm.8752

Genus *Vulcanithermus*^{VP} Miroshnichenko et al. 2003. N4Lid DOI: 10.1601/nm.541

Vulcanithermus mediatlanticus^{VP} Miroshnichenko et al. 2003. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 14978. High-quality 16S rRNA sequence S000458920 (RDP), AJ507298 (Genbank). N4Lid DOI: 10.1601/nm.542

Phylum "Chrysiogenetes" Garrity and Holt 2001. N4Lid DOI: 10.1601/nm.543

Class "Chrysiogenetes" N4Lid DOI: 10.1601/nm.544

Order Chrysiogenales^{VP} Garrity and Holt 2002. N4Lid DOI: 10.1601/nm.545

Family Chrysiogenaceae^{VP} Garrity and Holt 2002. N4Lid DOI: 10.1601/nm.546

Genus Chrysiogenes^{VP} Macy et al. 1996. N4Lid DOI: 10.1601/nm.547

Chrysiogenes arsenatis^{VP} Macy et al. 1996. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 700172. High-quality 16S rRNA sequence S000130034 (RDP), X81319 (Genbank). GOLD ID: Gi00740. GCAT ID: 000959_GCAT. Entrez genome id: 12520. Sequenced strain: DSM 11915 is type material. Genome sequencing is incomplete. Number of genomes of this species sequenced 1 (GOLD) 1 (NCBI). N4Lid DOI: 10.1601/nm.548

Phylum "Chloroflexi" Garrity and Holt 2001. N4Lid DOI: 10.1601/nm.549

Class "Chloroflexi" N4Lid DOI: 10.1601/nm.550

Order "Chloroflexales" N4Lid DOI: 10.1601/nm.551

Family "Chloroflexaceae" N4Lid DOI: 10.1601/nm.552

Genus Chloroflexus^{AL} Pierson and Castenholz 1974. N4Lid DOI: 10.1601/nm.553

Chloroflexus aurantiacus^{AL} Pierson and Castenholz 1974. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 29366. High-quality 16S rRNA sequence S000482832 (RDP), D38365 (Genbank). GOLD ID: Gi00150. GCAT ID: 000954_GCAT. Entrez genome id: 59. Sequenced strain: J-10-fl is from a non-type strain. Genome sequencing is incomplete. Number of genomes of this species sequenced 1 (GOLD) 1 (NCBI). N4Lid DOI: 10.1601/nm.554

Chloroflexus aggregans^{VP} Hanada et al. 1995. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 9485. High-quality 16S rRNA sequence S000482831 (RDP), D32255 (Genbank). GOLD ID: Gi00930. GCAT ID: 000955_GCAT. Entrez genome id: 13491. Sequenced strain: DSM 9485 is type material. Genome sequencing is incomplete. Number of genomes of this species sequenced 1 (GOLD) 1 (NCBI). N4Lid DOI: 10.1601/nm.555

Genus Chloronema^{AL} Dubinina and Gorlenko 1975. N4Lid DOI: 10.1601/nm.556

Chloronema giganteum^{AL} Dubinina and Gorlenko 1975. Source of type material recommended for DOE sponsored genome sequencing by the JGI: No viable deposit available. GOLD ID: Gi00931. GCAT ID: 000957_GCAT. Sequenced strain: UdG9001 is from a non-type strain. Genome sequencing is incomplete. Number of genomes of this species sequenced 1 (GOLD). N4Lid DOI: 10.1601/nm.557

Genus Heliothrix^{VP} Pierson et al. 1986. N4Lid DOI: 10.1601/nm.558

Heliothrix oregonensis^{VP} Pierson et al. 1986. Source of type material recommended for DOE sponsored genome sequencing by the JGI: IS/F-1, in coculture with *Isoosphaera pallida*. GOLD ID: Gi00946. GCAT ID: 001139_GCAT. Genome sequence is from a non-type strain. Genome sequencing is incomplete. Number of genomes of this species sequenced 1 (GOLD) 1 (NCBI). N4Lid DOI: 10.1601/nm.559

Genus Roseiflexus^{VP} Hanada et al. 2002. GOLD ID: Gi00963. GCAT ID: 001430_GCAT. Entrez genome id: 16190. Sequenced strain: RS-1 is from a non-type strain. Genome sequencing is incomplete. Number of genomes of this species sequenced 1 (GOLD) 1 (NCBI). N4Lid DOI: 10.1601/nm.560

Roseiflexus castenholzii^{VP} Hanada et al. 2002. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 13941. High-quality 16S rRNA sequence S000469300 (RDP), AB041226 (Genbank). GOLD ID: Gi00962. GCAT ID: 001429_GCAT. Entrez genome id: 13462. Sequenced strain: DSM 13941 is type material. Genome sequencing is incomplete. Number of genomes of this species sequenced 1 (GOLD) 1 (NCBI). N4Lid DOI: 10.1601/nm.561

Family Oscillochloridaceae^{VP} Keppen et al 2000. N4Lid DOI: 10.1601/nm.562

Genus *Oscillochloris* ^{VP} Gorlenko and Pivovarova 1989. N4Lid DOI: 10.1601/nm.563

Oscillochloris chrysea ^{VP} Gorlenko and Pivovarova 1989. Source of type material recommended for DOE sponsored genome sequencing by the JGI: No viable deposit available. N4Lid DOI: 10.1601/nm.564

Oscillochloris trichoides ^{VP} (ex Szafer) Gorlenko and Korotkov 1989. Source of type material recommended for DOE sponsored genome sequencing by the JGI: No viable deposit available. N4Lid DOI: 10.1601/nm.565

Order "Herpetosiphonales" N4Lid DOI: 10.1601/nm.566

Family "Herpetosiphonaceae" N4Lid DOI: 10.1601/nm.567

Genus *Herpetosiphon* ^{AL} Holt and Lewin 1968. N4Lid DOI: 10.1601/nm.568

Herpetosiphon aurantiacus ^{AL} Holt and Lewin 1968. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 23779. High-quality 16S rRNA sequence S000436218 (RDP), M34117 (Genbank). GOLD ID: Gi00947. GCAT ID: 001142_GCAT. Entrez genome id: 16523. Sequenced strain: ATCC 23779 is type material. Genome sequencing is incomplete. Number of genomes of this species sequenced 1 (GOLD) 1 (NCBI). N4Lid DOI: 10.1601/nm.569

Herpetosiphon geysericola ^{AL} (Copeland 1936) Lewin 1970. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 23076. High-quality 16S rRNA sequence S000427981 (RDP), AF039293 (Genbank). N4Lid DOI: 10.1601/nm.571

Class *Anaerolineae* ^{VP} Yamada et al 2006. N4Lid DOI: 10.1601/nm.574

Order *Anaerolineales* ^{VP} Yamada et al. 2006. N4Lid DOI: 10.1601/nm.575

Family *Anaerolineaceae* ^{VP} Yamada et al. 2006. N4Lid DOI: 10.1601/nm.576

Genus *Anaerolinea* ^{VP} Sekiguchi et al. 2003. N4Lid DOI: 10.1601/nm.577

Anaerolinea thermophila ^{VP} Sekiguchi et al. 2003. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 14523. High-quality 16S rRNA sequence S000383421 (RDP), AB046413 (Genbank). GOLD ID: Gi01299. GCAT ID: 000699_GCAT. Sequenced strain: DSM 14523 is type material. Genome sequencing is incomplete. Number of genomes of this species sequenced 1 (GOLD). N4Lid DOI: 10.1601/nm.578

Anaerolinea thermolimosa ^{VP} Yamada et al. 2006. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 16554. High-quality 16S rRNA sequence S000125963 (RDP), AB109437 (Genbank). N4Lid DOI: 10.1601/nm.10124

Subclass *Caldilineae* ^{VP} Yamada et al 2006. N4Lid DOI: 10.1601/nm.10330

Order *Caldilineales* ^{VP} Yamada et al 2006. N4Lid DOI: 10.1601/nm.10331

Family "Caldilineaceae" N4Lid DOI: 10.1601/nm.10332

Genus *Caldilinea* ^{VP} Sekiguchi et al. 2003. N4Lid DOI: 10.1601/nm.579

Caldilinea aerophila ^{VP} Sekiguchi et al. 2003. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 14535. N4Lid DOI: 10.1601/nm.580

Genus *Leptolinea* ^{VP} Yamada et al. 2006. N4Lid DOI: 10.1601/nm.10128

Leptolinea tardivitalis ^{VP} Yamada et al. 2006. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 16556. High-quality 16S rRNA sequence S000125078 (RDP), AB109438 (Genbank). N4Lid DOI: 10.1601/nm.10127

Genus *Levilinea* ^{VP} Yamada et al. 2006. N4Lid DOI: 10.1601/nm.10126

Levilinea saccharolytica ^{VP} Yamada et al. 2006. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 16555. High-quality 16S rRNA sequence S000125079 (RDP), AB109439 (Genbank). N4Lid DOI: 10.1601/nm.10125

Phylum "Thermomicrobia" N4Lid DOI: 10.1601/nm.581

Class *Thermomicrobia* ^{VP} Garrity and Holt 2001. N4Lid DOI: 10.1601/nm.582

Order *Thermomicrobiales* ^{VP} Garrity and Holt 2002. N4Lid DOI: 10.1601/nm.583

Family *Thermomicrobiaceae* ^{VP} Garrity and Holt 2002. N4Lid DOI: 10.1601/nm.584

Genus *Thermomicrobium* ^{AL} Jackson et al. 1973. N4Lid DOI: 10.1601/nm.585

Thermomicrobium roseum^{AL} Jackson et al. 1973. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 27502. High-quality 16S rRNA sequence S000436216 (RDP), M34115 (Genbank). GOLD ID: Gi00735. GCAT ID: 001606_GCAT. Entrez genome id: 12533. Sequenced strain: DSM 5159 is type material. Genome sequencing is incomplete. Number of genomes of this species sequenced 1 (GOLD) 1 (NCBI). N4Lid DOI: 10.1601/nm.586

Thermomicrobium fosteri^{AL} Phillips and Perry 1976. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 29033 re-deposited as ATCC 35268. N4Lid DOI: 10.1601/nm.587

Phylum Nitrospira^{VP} Watson et al. 1986. N4Lid DOI: 10.1601/nm.588

Class "Nitrospira" N4Lid DOI: 10.1601/nm.589

Order "Nitrospirales" N4Lid DOI: 10.1601/nm.590

Family "Nitrospiraceae" N4Lid DOI: 10.1601/nm.591

Genus "Nitrospira" N4Lid DOI: 10.1601/nm.592

Nitrospira marina^{VP} Watson et al. 1986. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 43039. GOLD ID: Gi00859. GCAT ID: 001271_GCAT. Entrez genome id: 13446. Sequenced strain: Nb 295 is from a non-type strain. Genome sequencing is incomplete. Number of genomes of this species sequenced 1 (GOLD) 1 (NCBI). N4Lid DOI: 10.1601/nm.593

Nitrospira moscoviensis^{VP} Ehrlich et al. 2001. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 10035. High-quality 16S rRNA sequence S000005124 (RDP), X82558 (Genbank). N4Lid DOI: 10.1601/nm.594

Genus Leptospirillum^{VP} (ex Markosyan 1972) Hippe 2000. GOLD ID: Gi00328. GCAT ID: 001166_GCAT. Entrez genome id: 0. Sequenced strain: environmental sample is from a non-type strain. Genome sequencing is incomplete. Number of genomes of this species sequenced 1 (GOLD). N4Lid DOI: 10.1601/nm.595

Leptospirillum ferrooxidans^{VP} (ex Markosyan 1972) Hippe 2000. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 29047. High-quality 16S rRNA sequence S000014647 (RDP), X86776 (Genbank). GOLD ID: Gi01339. GCAT ID: 001753_GCAT. Sequenced strain: DSM 2705 is type material. Genome sequencing is incomplete. Number of genomes of this species sequenced 2 (GOLD) 1 (NCBI). N4Lid DOI: 10.1601/nm.596

Leptospirillum ferriphilum^{VP} Coram and Rawlings 2002. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 49881. High-quality 16S rRNA sequence S000392207 (RDP), AF356829 (Genbank). N4Lid DOI: 10.1601/nm.597

Leptospirillum thermoferrooxidans^{VP} Hippe 2000. Source of type material recommended for DOE sponsored genome sequencing by the JGI: L-88, maintained in the collection of the Institute of Microbiology. N4Lid DOI: 10.1601/nm.598

Genus "Magnetobacterium" N4Lid DOI: 10.1601/nm.599

"Magnetobacterium bavaricum" Source of type material recommended for DOE sponsored genome sequencing by the JGI: No viable deposit available. High-quality 16S rRNA sequence S000010403 (RDP), X71838 (Genbank). N4Lid DOI: 10.1601/nm.600

Genus Thermodesulfovibrio^{VP} Henry et al. 1994. N4Lid DOI: 10.1601/nm.601

Thermodesulfovibrio yellowstonii^{VP} Henry et al. 1994. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 51303. High-quality 16S rRNA sequence S000414424 (RDP), L14619 (Genbank). GOLD ID: Gi00736. GCAT ID: 001604_GCAT. Entrez genome id: 12532. Sequenced strain: DSM 11347 is from a non-type strain. Genome sequencing is incomplete. Number of genomes of this species sequenced 1 (GOLD) 1 (NCBI). N4Lid DOI: 10.1601/nm.602

Thermodesulfovibrio islandicus^{VP} Sonne-Hansen and Ahring 2000. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 12570. High-quality 16S rRNA sequence S000011652 (RDP), X96726 (Genbank). N4Lid DOI: 10.1601/nm.603

Phylum "Deferribacteres" Garrity and Holt 2001. N4Lid DOI: 10.1601/nm.604

Class "Deferribacteres" N4Lid DOI: 10.1601/nm.605

Order Deferribacterales^{VP} Huber and Stetter 2002. N4Lid DOI: 10.1601/nm.606

Family Deferribacteraceae ^{VP} Huber and Stetter 2002. N4Lid DOI: 10.1601/nm.607

Genus Deferribacter ^{VP} Greene et al. 1997. N4Lid DOI: 10.1601/nm.608

Deferribacter thermophilus ^{VP} Greene et al. 1997. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 14813. High-quality 16S rRNA sequence S000438418 (RDP), U75602 (Genbank). N4Lid DOI: 10.1601/nm.609

Deferribacter abyssi ^{VP} Miroshnichenko et al. 2003. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 14873. High-quality 16S rRNA sequence S000102964 (RDP), AJ515882 (Genbank). N4Lid DOI: 10.1601/nm.610

Deferribacter desulfuricans ^{VP} Takai et al. 2003. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 14783. High-quality 16S rRNA sequence S000133896 (RDP), AB086060 (Genbank). GOLD ID: Gi01847. GCAT ID: 000841_GCAT. Sequenced strain: SSM1 is type material. Genome sequencing is incomplete. Number of genomes of this species sequenced 1 (GOLD). N4Lid DOI: 10.1601/nm.611

Genus Denitrovibrio ^{VP} Myhr and Torsvik 2000. N4Lid DOI: 10.1601/nm.612

Denitrovibrio acetiphilus ^{VP} Myhr and Torsvik 2000. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 12809. High-quality 16S rRNA sequence S000388136 (RDP), AF146526 (Genbank). N4Lid DOI: 10.1601/nm.613

Genus Flexistipes ^{VP} Fiala et al. 2000. N4Lid DOI: 10.1601/nm.614

Flexistipes sinusarabici ^{VP} Fiala et al. 2000. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 49648. High-quality 16S rRNA sequence S000436527 (RDP), M59231 (Genbank). N4Lid DOI: 10.1601/nm.615

Genus Geovibrio ^{VP} Caccavo et al. 2000. N4Lid DOI: 10.1601/nm.616

Geovibrio ferrireducens ^{VP} Caccavo et al. 2000. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 51996. High-quality 16S rRNA sequence S000004753 (RDP), X95744 (Genbank). N4Lid DOI: 10.1601/nm.617

Geovibrio thiophilus ^{VP} Janssen et al. 2002. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC BAA-311. High-quality 16S rRNA sequence S000128273 (RDP), AJ299402 (Genbank). GOLD ID: Gi01619. GCAT ID: 001100_GCAT. Sequenced strain: ATCC BAA-311 is type material. Genome sequencing is incomplete. Number of genomes of this species sequenced 1 (GOLD). N4Lid DOI: 10.1601/nm.618

Genus Mucispirillum ^{VP} Robertson et al. 2005. N4Lid 10.1601/nm.9463

Mucispirillum schaedleri ^{VP} Robertson et al. 2005. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC BAA-1009. High-quality 16S rRNA sequence S000540537 (RDP), AY387670 (Genbank). N4Lid 10.1601/nm.9462

Family Incertae sedis 3 ^{NVP} N4Lid DOI: 10.1601/nm.619

Genus Synergistes ^{VP} Allison et al. 1993. N4Lid DOI: 10.1601/nm.620

Synergistes jonesii ^{VP} Allison et al. 1993. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 49833. High-quality 16S rRNA sequence S000414329 (RDP), L08066 (Genbank). GOLD ID: Gi01742. GCAT ID: 000662_GCAT. Genome sequence is from a non-type strain. Genome sequencing is incomplete. Number of genomes of this species sequenced 1 (GOLD). N4Lid DOI: 10.1601/nm.621

Genus Caldithrix ^{VP} Miroshnichenko et al. 2003. N4Lid DOI: 10.1601/nm.622

Caldithrix abyssi ^{VP} Miroshnichenko et al. 2003. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 13497. High-quality 16S rRNA sequence S000116870 (RDP), AJ430587 (Genbank). N4Lid DOI: 10.1601/nm.623

Phylum "Cyanobacteria" (ex Stanier 1974) Cavalier-Smith 2002. N4Lid DOI: 10.1601/nm.624

Class "Cyanobacteria" N4Lid DOI: 10.1601/nm.625

Family Family 1.1 ^{NVP} N4Lid DOI: 10.1601/nm.627

Genus "Chamaesiphon" N4Lid DOI: 10.1601/nm.628

"Chamaesiphon minutus" Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 27169. N4Lid DOI: 10.1601/nm.629

"Chamaesiphon subglobosus" Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 29397. N4Lid DOI: 10.1601/nm.630

Genus "*Chroococcus*" N4Lid DOI: 10.1601/nm.631

"Chroococcus sp" Source of type material recommended for DOE sponsored genome sequencing by the JGI: No viable deposit available. N4Lid DOI: 10.1601/nm.632

Genus "*Cyanobacterium*" N4Lid DOI: 10.1601/nm.633

"Cyanobacterium sp" Source of type material recommended for DOE sponsored genome sequencing by the JGI: No viable deposit available. N4Lid DOI: 10.1601/nm.634

Genus "*Cyanobium*" N4Lid DOI: 10.1601/nm.635

"Cyanobium gracile" Source of type material recommended for DOE sponsored genome sequencing by the JGI: No viable deposit available. N4Lid DOI: 10.1601/nm.636

Genus "*Cyanothece*" GOLD ID: Gi01410. GCAT ID: 000867_GCAT. Sequenced strain: CCY0110 is from a non-type strain. Genome sequencing is incomplete. Number of genomes of this species sequenced 8 (GOLD). N4Lid DOI: 10.1601/nm.637

"Cyanothece" Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 29141. N4Lid DOI: 10.1601/nm.638

"Cyanothece sp" Source of type material recommended for DOE sponsored genome sequencing by the JGI: No viable deposit available. N4Lid DOI: 10.1601/nm.639

Genus "*Dactylococcopsis*" N4Lid DOI: 10.1601/nm.640

Dactylococcopsis (Myxobaktron) salina^{NVP} Source of type material recommended for DOE sponsored genome sequencing by the JGI: PCC 8305. N4Lid DOI: 10.1601/nm.641

Genus "*Gloeobacter*" N4Lid DOI: 10.1601/nm.642

"Gloeobacter violaceus" Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 29082. GOLD ID: Gc00160. GCAT ID: 000450_GCAT. Entrez genome id: 9606. Sequenced strain: PCC 7421 is from a non-type strain. Genome sequencing is completed. Number of genomes of this species sequenced 1 (GOLD) 1 (NCBI). N4Lid DOI: 10.1601/nm.643

Genus "*Gloeocapsa*" N4Lid DOI: 10.1601/nm.644

"Gloeocapsa" Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 27928. N4Lid DOI: 10.1601/nm.645

Genus "*Gloeotheca*" GOLD ID: Gi00845. GCAT ID: 001108_GCAT. Entrez genome id: 13575. Sequenced strain: PCC 6909 is from a non-type strain. Genome sequencing is incomplete. Number of genomes of this species sequenced 1 (GOLD). N4Lid DOI: 10.1601/nm.646

"Gloeotheca" Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 27151. N4Lid DOI: 10.1601/nm.647

Genus "*Microcystis*" N4Lid DOI: 10.1601/nm.648

Microcystis aeruginosa^{VP} Otsuka et al. 2001. Source of type material recommended for DOE sponsored genome sequencing by the JGI: IAM M-247. High-quality 16S rRNA sequence S000015833 (RDP), AB035549 (Genbank). GOLD ID: Gi00374. GCAT ID: 001212_GCAT. Entrez genome id: 15702. Sequenced strain: PCC 7806 is from a non-type strain. Genome sequencing is incomplete. Number of genomes of this species sequenced 1 (GOLD) 1 (NCBI). N4Lid DOI: 10.1601/nm.649

Genus *Prochlorococcus*^{VP} Chisholm et al. 2001. GOLD ID: Gc00150. GCAT ID: 000460_GCAT. Entrez genome id: 230. Sequenced strain: WH8102 is from a non-type strain. Genome sequencing is completed. Number of genomes of this species sequenced 4 (GOLD). N4Lid DOI: 10.1601/nm.650

Prochlorococcus marinus subsp. marinus^{VP} Chisholm et al. 1992. Source of type material recommended for DOE sponsored genome sequencing by the JGI: CCMP-1375. GOLD ID: Gc00149. GCAT ID: 000461_GCAT. Entrez genome id: 419. Sequenced strain: CCMP1375 (SS120) is from a non-type strain. Genome sequencing is completed. Number of genomes of this species sequenced 12 (GOLD) 11 (NCBI). N4Lid DOI: 10.1601/nm.651

Prochlorococcus marinus subsp. pastoris^{VP} Rippka et al. 2000. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 700925. High-quality 16S rRNA sequence S000388727 (RDP), AF180967 (Genbank). GOLD ID: Gc00152. GCAT ID: 000458_GCAT. Entrez genome id: 213. Sequenced strain: CCMP1986 (MED4) is from a non-type

strain. Genome sequencing is completed. Number of genomes of this species sequenced 1 (GOLD) 1 (NCBI). N4Lid DOI: 10.1601/nm.652

Genus *Prochloron*^{VP} (ex Lewin 1977) Florenzano et al. 1986. N4Lid DOI: 10.1601/nm.653

Prochloron didemni^{VP} (ex Lewin 1975) Florenzano et al. 1986. Source of type material recommended for DOE sponsored genome sequencing by the JGI: No viable deposit available. GOLD ID: Gi00723. GCAT ID: 001372_GCAT. Entrez genome id: 13452. Genome sequence is from a non-type strain. Genome sequencing is incomplete. Number of genomes of this species sequenced 1 (GOLD) 1 (NCBI). N4Lid DOI: 10.1601/nm.654

Genus "*Synechococcus*" GOLD ID: Gc00343. GCAT ID: 000267_GCAT. Entrez genome id: 16251. Sequenced strain: JA-3-3Ab is from a non-type strain. Genome sequencing is completed. Number of genomes of this species sequenced 16 (GOLD) 2 (NCBI). N4Lid DOI: 10.1601/nm.655

"Synechococcus" Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 27265. GOLD ID: Gc00243. GCAT ID: 000366_GCAT. Entrez genome id: 13282. Sequenced strain: PCC 6301 is from a non-type strain. Genome sequencing is completed. Number of genomes of this species sequenced 1 (GOLD) 15 (NCBI). N4Lid DOI: 10.1601/nm.656

"Synechococcus cedrorum" Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 29140. N4Lid DOI: 10.1601/nm.657

"Synechococcus lividus" Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 27149. N4Lid DOI: 10.1601/nm.658

Genus "*Synechocystis*" GOLD ID: Gc00003. GCAT ID: 000607_GCAT. Entrez genome id: 60. Sequenced strain: PCC6803 is from a non-type strain. Genome sequencing is completed. Number of genomes of this species sequenced 1 (GOLD). N4Lid DOI: 10.1601/nm.659

"Synechocystis" Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 27150. N4Lid DOI: 10.1601/nm.660

Family Family 2.1^{NVP} N4Lid DOI: 10.1601/nm.662

Genus "*Cyanocystis*" N4Lid DOI: 10.1601/nm.663

"Cyanocystis sp" Source of type material recommended for DOE sponsored genome sequencing by the JGI: No viable deposit available. N4Lid DOI: 10.1601/nm.664

Genus "*Dermocarpella*" N4Lid DOI: 10.1601/nm.665

"Dermocarpella incrassata" Source of type material recommended for DOE sponsored genome sequencing by the JGI: SAG 29.84. High-quality 16S rRNA sequence S000130633 (RDP), AJ344559 (Genbank). N4Lid DOI: 10.1601/nm.666

Genus "*Stanieria*" N4Lid DOI: 10.1601/nm.667

"Stanieria" Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 29367. N4Lid DOI: 10.1601/nm.668

Genus "*Xenococcus*" N4Lid DOI: 10.1601/nm.669

"Xenococcus schousboei" Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 29373. N4Lid DOI: 10.1601/nm.670

Family Family 2.2^{NVP} N4Lid DOI: 10.1601/nm.671

Genus "*Chroococciopsis*" N4Lid DOI: 10.1601/nm.672

"Chroococciopsis" Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 27176. N4Lid DOI: 10.1601/nm.673

"Chroococciopsis thermalis" Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 27900. High-quality 16S rRNA sequence S000012080 (RDP), AB039005 (Genbank). N4Lid DOI: 10.1601/nm.674

Genus "*Myxosarcina*" N4Lid DOI: 10.1601/nm.675

"Myxosarcina concinna" Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 29377. N4Lid DOI: 10.1601/nm.676

"Myxosarcina sp" Source of type material recommended for DOE sponsored genome sequencing by the JGI: No viable deposit available. N4Lid DOI: 10.1601/nm.677

Genus "*Pleurocapsa*" N4Lid DOI: 10.1601/nm.678

"Pleurocapsa" Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 29388. N4Lid DOI: 10.1601/nm.679

Family Family 3.1^{NVP} N4Lid DOI: 10.1601/nm.681

Genus "Arthrospira" GOLD ID: Gi01522. GCAT ID: 001512_GCAT. Sequenced strain: PCC 8005 is from a non-type strain. Genome sequencing is incomplete. Number of genomes of this species sequenced 1 (GOLD). N4Lid DOI: 10.1601/nm.682

"Arthrospira jenneri" Source of type material recommended for DOE sponsored genome sequencing by the JGI: No viable deposit available. N4Lid DOI: 10.1601/nm.683

"Arthrospira maxima" Source of type material recommended for DOE sponsored genome sequencing by the JGI: No viable deposit available. N4Lid DOI: 10.1601/nm.684

"Arthrospira platensis" Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 29408. GOLD ID: Gi00588. GCAT ID: 001511_GCAT. Entrez genome id: 13465. Genome sequence is from a non-type strain. Genome sequencing is incomplete. Number of genomes of this species sequenced 1 (GOLD). N4Lid DOI: 10.1601/nm.685

Genus "Borzia" N4Lid DOI: 10.1601/nm.686

"Borzia sp" Source of type material recommended for DOE sponsored genome sequencing by the JGI: No viable deposit available. N4Lid DOI: 10.1601/nm.687

Genus "Crinalium" N4Lid DOI: 10.1601/nm.688

Crinalium epipsammum^{VP} De Winder et al. 1991. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 49662. N4Lid DOI: 10.1601/nm.689

Genus "Geitlerinema" N4Lid DOI: 10.1601/nm.690

"Geitlerinema" Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 29120. N4Lid DOI: 10.1601/nm.691

Genus Halospirulina^{VP} Nübel et al. 2000. N4Lid DOI: 10.1601/nm.692

Halospirulina tapeticola^{VP} Nübel et al. 2000. Source of type material recommended for DOE sponsored genome sequencing by the JGI: CCC Baja-95 Cl. 2. High-quality 16S rRNA sequence S000003918 (RDP), Y18791 (Genbank). N4Lid DOI: 10.1601/nm.693

Genus "Leptolyngbya" N4Lid DOI: 10.1601/nm.694

"Leptolyngbya" Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 29117. N4Lid DOI: 10.1601/nm.695

Genus "Limnothrix" N4Lid DOI: 10.1601/nm.696

"Limnothrix sp" Source of type material recommended for DOE sponsored genome sequencing by the JGI: No viable deposit available. N4Lid DOI: 10.1601/nm.697

Genus "Lyngbya" N4Lid DOI: 10.1601/nm.698

"Lyngbya confervoides" Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 29346. N4Lid DOI: 10.1601/nm.699

Genus "Microcoleus" N4Lid DOI: 10.1601/nm.700

"Microcoleus chthonoplastes" Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 29206. GOLD ID: Gi01423. GCAT ID: 000888_GCAT. Sequenced strain: PCC 7420 is from a non-type strain. Genome sequencing is incomplete. Number of genomes of this species sequenced 1 (GOLD). N4Lid DOI: 10.1601/nm.701

"Microcoleus lacustris" Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 29128. N4Lid DOI: 10.1601/nm.702

Genus "Oscillatoria" N4Lid DOI: 10.1601/nm.703

"Oscillatoria acuminata" Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 27930. High-quality 16S rRNA sequence S000010115 (RDP), AB039014 (Genbank). N4Lid DOI: 10.1601/nm.704

"Oscillatoria agardhii" Source of type material recommended for DOE sponsored genome sequencing by the JGI: NIVA-CYA 68. N4Lid DOI: 10.1601/nm.705

Oscillatoria nigro-viridis^{NVP} Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 29134. N4Lid DOI: 10.1601/nm.706

"Oscillatoria princeps" Source of type material recommended for DOE sponsored genome sequencing by the JGI: No viable deposit available. N4Lid DOI: 10.1601/nm.707

"Oscillatoria prolifera" Source of type material recommended for DOE sponsored genome sequencing by the JGI: No viable deposit available. N4Lid DOI: 10.1601/nm.708

"Oscillatoria sancta" Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 29209. High-quality 16S rRNA sequence S000000475 (RDP), AB039015 (Genbank). N4Lid DOI: 10.1601/nm.709

"Oscillatoria tenuis" Source of type material recommended for DOE sponsored genome sequencing by the JGI: No viable deposit available. N4Lid DOI: 10.1601/nm.710

Genus "Planktothrix" N4Lid DOI: 10.1601/nm.711

"Planktothrix sp" Source of type material recommended for DOE sponsored genome sequencing by the JGI: No viable deposit available. N4Lid DOI: 10.1601/nm.712

Genus Prochlorothrix^{VP} Burger-Wiersma et al. 1989. N4Lid DOI: 10.1601/nm.713

Prochlorothrix hollandica^{VP} Burger-Wiersma et al. 1989. Source of type material recommended for DOE sponsored genome sequencing by the JGI: CCAP 1490/1. N4Lid DOI: 10.1601/nm.714

Genus "Pseudanabaena" N4Lid DOI: 10.1601/nm.715

"Pseudanabaena tenuis" Source of type material recommended for DOE sponsored genome sequencing by the JGI: No viable deposit available. N4Lid DOI: 10.1601/nm.716

Genus "Spirulina" N4Lid DOI: 10.1601/nm.717

"Spirulina major" Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 29542. N4Lid DOI: 10.1601/nm.718

Genus "Starria" N4Lid DOI: 10.1601/nm.719

Starria zimbabweensis^{NVP} Source of type material recommended for DOE sponsored genome sequencing by the JGI: No viable deposit available. N4Lid DOI: 10.1601/nm.720

Genus "Symploca" N4Lid DOI: 10.1601/nm.721

"Symploca" Source of type material recommended for DOE sponsored genome sequencing by the JGI: PCC 8002. N4Lid DOI: 10.1601/nm.722

Genus "Trichodesmium" N4Lid DOI: 10.1601/nm.723

"Trichodesmium" Source of type material recommended for DOE sponsored genome sequencing by the JGI: No viable deposit available. GOLD ID: Gc00398. GCAT ID: 000211_GCAT. Entrez genome id: 318. Sequenced strain: IMS101 is from a non-type strain. Genome sequencing is completed. Number of genomes of this species sequenced 2 (GOLD). N4Lid DOI: 10.1601/nm.724

Genus "Tychonema" N4Lid DOI: 10.1601/nm.725

"Tychonema sp" Source of type material recommended for DOE sponsored genome sequencing by the JGI: No viable deposit available. GOLD ID: Gc00398. GCAT ID: 000211_GCAT. Entrez genome id: 318. Sequenced strain: IMS101 is from a non-type strain. Genome sequencing is completed. Number of genomes of this species sequenced 2 (GOLD) 0 (NCBI). N4Lid DOI: 10.1601/nm.726

Family Family 4.1^{NVP} N4Lid DOI: 10.1601/nm.728

Genus "Anabaena" N4Lid DOI: 10.1601/nm.729

"Anabaena sp." Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 29208. High-quality 16S rRNA sequence S000391436 (RDP), AF317629 (Genbank). N4Lid DOI: 10.1601/nm.730

"Anabaena cylindrica" Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 27899. High-quality 16S rRNA sequence S000428699 (RDP), AF091150 (Genbank). N4Lid DOI: 10.1601/nm.732

"Anabaena sphaerica" Source of type material recommended for DOE sponsored genome sequencing by the JGI: UTEX 1616. N4Lid DOI: 10.1601/nm.733

Genus "Anabaenopsis" N4Lid DOI: 10.1601/nm.734

"Anabaenopsis sp." Source of type material recommended for DOE sponsored genome sequencing by the JGI: PCC 7905. High-quality 16S rRNA sequence S000434723 (RDP), AY038035 (Genbank). N4Lid DOI: 10.1601/nm.735

Genus "*Aphanizomenon*" N4Lid DOI: 10.1601/nm.736

Aphanizomenon flos-aquae^{NVP} Source of type material recommended for DOE sponsored genome sequencing by the JGI: CCAP 1401/1. High-quality 16S rRNA sequence S000434723 (RDP), AY038035 (Genbank). N4Lid DOI: 10.1601/nm.737

Genus "*Cyanospira*" N4Lid DOI: 10.1601/nm.738

Cyanospira sp" Source of type material recommended for DOE sponsored genome sequencing by the JGI: No viable deposit available. N4Lid DOI: 10.1601/nm.739

Genus "*Cylindrospermopsis*" N4Lid DOI: 10.1601/nm.740

Cylindrospermopsis raciborskii" Source of type material recommended for DOE sponsored genome sequencing by the JGI: No viable deposit available. N4Lid DOI: 10.1601/nm.741

Genus "*Cylindrospermum*" N4Lid DOI: 10.1601/nm.742

Cylindrospermum majus" Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 33001. N4Lid DOI: 10.1601/nm.743

Cylindrospermum stagnale" Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 29204. High-quality 16S rRNA sequence S000387821 (RDP), AF132789 (Genbank). N4Lid DOI: 10.1601/nm.744

Genus "*Nodularia*" N4Lid DOI: 10.1601/nm.745

Nodularia harveyana" Source of type material recommended for DOE sponsored genome sequencing by the JGI:M93/1. N4Lid DOI: 10.1601/nm.746

Nodularia spumigena" Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 29167. High-quality 16S rRNA sequence S000014729 (RDP), AB039002 (Genbank). GOLD ID: Gi00861. GCAT ID: 001274_GCAT. Entrez genome id: 13447. Sequenced strain: CCY9414 is from a non-type strain. Genome sequencing is incomplete. Number of genomes of this species sequenced 1 (GOLD) 1 (NCBI). N4Lid DOI: 10.1601/nm.747

Genus "*Nostoc*" GOLD ID: Gc00070. GCAT ID: 000540_GCAT. Entrez genome id: 244. Sequenced strain: PCC 7120 is from a non-type strain. Genome sequencing is completed. Number of genomes of this species sequenced 1 (GOLD). N4Lid DOI: 10.1601/nm.748

Nostoc" Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 29150. N4Lid DOI: 10.1601/nm.749

Nostoc commune" Source of type material recommended for DOE sponsored genome sequencing by the JGI: No viable deposit available. N4Lid DOI: 10.1601/nm.750

Nostoc muscorum" Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 29105. N4Lid DOI: 10.1601/nm.751

Nostoc punctiforme" Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 29133. High-quality 16S rRNA sequence S000427839 (RDP), AF027655 (Genbank). GOLD ID: Gi00414. GCAT ID: 001275_GCAT. Entrez genome id: 216. Sequenced strain: ATCC 29133 is type material. Genome sequencing is incomplete. Number of genomes of this species sequenced 1 (GOLD) 1 (NCBI). N4Lid DOI: 10.1601/nm.752

Genus "*Scytonema*" N4Lid DOI: 10.1601/nm.753

Scytonema hofmanni" Source of type material recommended for DOE sponsored genome sequencing by the JGI: No viable deposit available. N4Lid DOI: 10.1601/nm.754

Family Family 4.2^{NVP} N4Lid DOI: 10.1601/nm.755

Genus "*Calothrix*" GOLD ID: Gi01687. GCAT ID: 000996_GCAT. Sequenced strain: SC01 is from a non-type strain. Genome sequencing is incomplete. Number of genomes of this species sequenced 1 (GOLD). N4Lid DOI: 10.1601/nm.756

Calothrix" Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 27901. N4Lid DOI: 10.1601/nm.757

Genus "*Rivularia*" N4Lid DOI: 10.1601/nm.758

Rivularia sp" Source of type material recommended for DOE sponsored genome sequencing by the JGI: No viable deposit available. N4Lid DOI: 10.1601/nm.759

Genus "*Tolypothrix*" N4Lid DOI: 10.1601/nm.760

"Tolypothrix" Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 29157. N4Lid DOI: 10.1601/nm.761

"Tolypothrix tenuis" Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 27914. N4Lid DOI: 10.1601/nm.762

Family Subsection 5.1^{NVP} N4Lid DOI: 10.1601/nm.764

Genus "*Chlorogloeopsis*" N4Lid DOI: 10.1601/nm.765

"Chlorogloeopsis früschiü" Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 27193. High-quality 16S rRNA sequence S000125343 (RDP), AB093489 (Genbank). N4Lid DOI: 10.1601/nm.766

Genus "*Fischerella*" N4Lid DOI: 10.1601/nm.767

"Fischerella thermalis" Source of type material recommended for DOE sponsored genome sequencing by the JGI: No viable deposit available. N4Lid DOI: 10.1601/nm.768

Genus "*Geitleria*" N4Lid DOI: 10.1601/nm.769

"Geitleria" Source of type material recommended for DOE sponsored genome sequencing by the JGI: NCTC 10915. N4Lid DOI: 10.1601/nm.770

Genus "*Iyengariella*" N4Lid DOI: 10.1601/nm.771

"Iyengariella sp" Source of type material recommended for DOE sponsored genome sequencing by the JGI: No viable deposit available. N4Lid DOI: 10.1601/nm.772

Genus "*Nostochopsis*" N4Lid DOI: 10.1601/nm.773

"Nostochopsis sp" Source of type material recommended for DOE sponsored genome sequencing by the JGI: No viable deposit available. N4Lid DOI: 10.1601/nm.774

Genus "*Stigonema*" N4Lid DOI: 10.1601/nm.775

Stigonema minutum^{VP} (ex Geitler 1925 Cavalier-Smith 2002. Source of type material recommended for DOE sponsored genome sequencing by the JGI: No viable deposit available. N4Lid DOI: 10.1601/nm.776

Phylum "*Chlorobi*" N4Lid DOI: 10.1601/nm.777

Class "*Chlorobia*" N4Lid DOI: 10.1601/nm.778

Order *Chlorobiales*^{AL} Gibbons and Murray 1978. N4Lid DOI: 10.1601/nm.779

Family *Chlorobiaceae*^{AL} Copeland 1956. N4Lid DOI: 10.1601/nm.780

Genus *Chlorobium*^{AL} Nadson 1906. N4Lid DOI: 10.1601/nm.781

Chlorobium limicola^{AL} Nadson 1906. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 245. High-quality 16S rRNA sequence S000381447 (RDP), Y10640 (Genbank). GOLD ID: Gi00145. GCAT ID: 000951_GCAT. Entrez genome id: 12606. Sequenced strain: DSM 245 is type material. Genome sequencing is incomplete. Number of genomes of this species sequenced 1 (GOLD) 1 (NCBI). N4Lid DOI: 10.1601/nm.782

Chlorobium clathratiforme^{VP} (Szafer 1911) Imhoff 2003. <== *Pelodictyon clathratiforme* (basonym). Synonym links through N4Lid: 10.1601/ex.801. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 5477. High-quality 16S rRNA sequence S000136808 (RDP), Y08106 (Genbank). N4Lid DOI: 10.1601/nm.783

† *Pelodictyon clathratiforme*^{AL} (Szafer 1911) Lauterborn 1913. ==> *Chlorobium clathratiforme* (new combination). Synonym links through N4Lid: 10.1601/ex.801. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ex.801. High-quality 16S rRNA sequence S000136808 (RDP), Y08106 (Genbank). N4Lid DOI: 10.1601/nm.801

Chlorobium luteolum^{VP} (Schmidle 1901) Imhoff 2003. <== *Pelodictyon luteolum* (basonym). Synonym links through N4Lid: 10.1601/ex.802. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 273. High-quality 16S rRNA sequence S000137057 (RDP), Y08107 (Genbank). GOLD ID: Gc00310. GCAT ID: 000300_GCAT. Entrez genome id: 13012. Sequenced strain: DSM 273 is type material. Genome sequencing is completed. Number of genomes of this species sequenced 1 (GOLD) 1 (NCBI). N4Lid DOI: 10.1601/nm.785

† *Pelodictyon luteolum*^{AL} (Schmidle 1901) Pfennig and Trüper 1971. ==> *Chlorobium luteolum* (new combination). Synonym links through N4Lid: 10.1601/ex.802. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 273. High-quality 16S rRNA sequence S000137057 (RDP), Y08107 (Genbank). GOLD ID: Gc00310. GCAT ID:

000300_GCAT. Entrez genome id: 13012. Sequenced strain: DSM 273 is type material. Genome sequencing is completed. Number of genomes of this species sequenced 1 (GOLD) 1 (NCBI). N4Lid DOI: 10.1601/nm.802

Chlorobium phaeobacteroides^{AL} Pfennig 1968. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 5477. High-quality 16S rRNA sequence S000137974 (RDP), Y08104 (Genbank). GOLD ID: Gc00471. GCAT ID: 000138_GCAT. Entrez genome id: 12609. Sequenced strain: DSM 5477 is type material. Genome sequencing is completed. Number of genomes of this species sequenced 2 (GOLD) 2 (NCBI). N4Lid DOI: 10.1601/nm.786

† ***Pelodictyon phaeoclathratiforme***^{VP} Overmann and Pfennig 1990. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 5477. High-quality 16S rRNA sequence S000137058 (RDP), Y08108 (Genbank). GOLD ID: Gi00440. GCAT ID: 000835_GCAT. Entrez genome id: 13011. Sequenced strain: DSM 5477 is type material. Genome sequencing is incomplete. Number of genomes of this species sequenced 1 (GOLD) 1 (NCBI). N4Lid DOI: 10.1601/nm.803

Chlorobium phaeovibrioides^{AL} Pfennig 1968. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 269. High-quality 16S rRNA sequence S000136880 (RDP), Y08105 (Genbank). N4Lid DOI: 10.1601/nm.787

Genus *Ancalochloris*^{AL} Gorlenko and Lebedeva 1971. N4Lid DOI: 10.1601/nm.790

Ancalochloris perfilievii^{AL} Gorlenko and Lebedeva 1971. Source of type material recommended for DOE sponsored genome sequencing by the JGI: No viable deposit available. N4Lid DOI: 10.1601/nm.791

Genus *Chlorobaculum*^{VP} Imhoff 2003. N4Lid DOI: 10.1601/nm.792

Chlorobaculum tepidum^{VP} (Wahlund et al. 1996) Imhoff 2003. <== ***Chlorobium tepidum*** (basonym). Synonym links through N4Lid: 10.1601/ex.788. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 49652. High-quality 16S rRNA sequence S000622337 (RDP), M58468 (Genbank). GOLD ID: Gc00092. GCAT ID: 000518_GCAT. Entrez genome id: 302. Sequenced strain: ATCC 49652 is type material. Genome sequencing is completed. Number of genomes of this species sequenced 1 (GOLD) 1 (NCBI). N4Lid DOI: 10.1601/nm.793

† ***Chlorobium tepidum***^{VP} Wahlund et al. 1996. ==> ***Chlorobaculum tepidum*** (new combination). Synonym links through N4Lid: 10.1601/ex.788. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 49652. High-quality 16S rRNA sequence S000622337 (RDP), M58468 (Genbank). GOLD ID: Gc00092. GCAT ID: 000518_GCAT. Entrez genome id: 302. Sequenced strain: ATCC 49652 is type material. Genome sequencing is completed. Number of genomes of this species sequenced 1 (GOLD) 1 (NCBI). N4Lid DOI: 10.1601/nm.788

Chlorobaculum chlorovibrioides^{VP} (Gorlenko et al. 1974) Imhoff 2003. <== ***Chlorobium chlorovibrioides*** (basonym). Synonym links through N4Lid: 10.1601/ex.784. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 1377. N4Lid DOI: 10.1601/nm.794

† ***Chlorobium chlorovibrioides***^{AL} Gorlenko et al. 1974. ==> ***Chlorobaculum chlorovibrioides*** (new combination). Synonym links through N4Lid: 10.1601/ex.784. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 1377. N4Lid DOI: 10.1601/nm.784

Chlorobaculum limnaeum^{VP} Imhoff 2003. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 1677. High-quality 16S rRNA sequence S000351380 (RDP), AJ290831 (Genbank). N4Lid DOI: 10.1601/nm.795

Chlorobaculum parvum^{VP} Imhoff 2003. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 263. High-quality 16S rRNA sequence S000381454 (RDP), Y10647 (Genbank). N4Lid DOI: 10.1601/nm.796

Chlorobaculum thiosulfatiphilum^{VP} Imhoff 2003. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 249. High-quality 16S rRNA sequence S000137973 (RDP), Y08102 (Genbank). N4Lid DOI: 10.1601/nm.797

Genus *Chloroherpeton*^{VP} Gibson et al. 1985. N4Lid DOI: 10.1601/nm.798

Chloroherpeton thalassium^{VP} Gibson et al. 1985. Source of type material recommended for DOE sponsored genome sequencing by the JGI: ATCC 35110. GOLD ID: Gi00734. GCAT ID: 000956_GCAT. Entrez genome id: 13218. Genome sequence is from a non-type strain. Genome sequencing is incomplete. Number of genomes of this species sequenced 1 (GOLD) 1 (NCBI). N4Lid DOI: 10.1601/nm.799

Genus *Pelodictyon*^{AL} Lauterborn 1913. N4Lid DOI: 10.1601/nm.800

Pelodictyon phaeum^{AL} Gorlenko 1972. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 728. N4Lid DOI: 10.1601/nm.804

Genus *Prosthecochloris*^{AL} Gorlenko 1970. GOLD ID: Gi00486. GCAT ID: 001378_GCAT. Entrez genome id: 12734. Genome sequence is from a non-type strain. Genome sequencing is incomplete. Number of genomes of this species sequenced 1 (GOLD) 1 (NCBI). N4Lid DOI: 10.1601/nm.805

Prosthecochloris aestuarii^{AL} Gorlenko 1970. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 271. High-quality 16S rRNA sequence S000138443 (RDP), Y07837 (Genbank). GOLD ID: Gi00485. GCAT ID: 001377_GCAT. Entrez genome id: 12749. Sequenced strain: DSM 271 is type material. Genome sequencing is incomplete. Number of genomes of this species sequenced 1 (GOLD) 1 (NCBI). N4Lid DOI: 10.1601/nm.806

Prosthecochloris vibrioformis^{VP} (Pelsh 1936) Imhoff 2003. <== *Chlorobium vibrioforme* (basonym). Synonym links through N4Lid: 10.1601/ex.789. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 260. High-quality 16S rRNA sequence S000004579 (RDP), M62791 (Genbank). GOLD ID: Gi00148. GCAT ID: 000953_GCAT. Entrez genome id: 12607. Sequenced strain: DSMZ 265 is from a non-type strain. Genome sequencing is incomplete. Number of genomes of this species sequenced 1 (GOLD) 1 (NCBI). N4Lid DOI: 10.1601/nm.807

† *Chlorobium vibrioforme*^{AL} Pelsh 1936. ==> *Prosthecochloris vibrioformis* (new combination). Synonym links through N4Lid: 10.1601/ex.789. Source of type material recommended for DOE sponsored genome sequencing by the JGI: DSM 260. High-quality 16S rRNA sequence S000004579 (RDP), M62791 (Genbank). GOLD ID: Gi00148. GCAT ID: 000953_GCAT. Entrez genome id: 12607. Sequenced strain: DSM 265 is from a non-type strain. Genome sequencing is incomplete. Number of genomes of this species sequenced 1 (GOLD) 1 (NCBI). N4Lid DOI: 10.1601/nm.789