

# Taxonomic outline of the phylum *Firmicutes*

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All taxa recognized within this volume of the rank of genus and above are listed below. The nomenclatural type is listed first within each taxon followed by the remaining taxa in alphabetical order.

## Phylum XIII. *Firmicutes*

### Class I. “*Bacilli*”

#### Order I. *Bacillales*<sup>AL (T)</sup>

##### Family I. *Bacillaceae*<sup>AL</sup>

- Genus I. *Bacillus*<sup>AL (T)</sup>
- Genus II. *Alkalibacillus*<sup>VP</sup>
- Genus III. *Amphibacillus*<sup>VP</sup>
- Genus IV. *Anoxybacillus*<sup>VP</sup>
- Genus V. *Cerasibacillus*<sup>VP</sup>
- Genus VI. *Filobacillus*<sup>VP</sup>
- Genus VII. *Geobacillus*<sup>VP</sup>
- Genus VIII. *Gracilibacillus*<sup>VP</sup>
- Genus IX. *Halobacillus*<sup>VP</sup>
- Genus X. *Halolactibacillus*<sup>VP</sup>
- Genus XI. *Lentibacillus*<sup>VP</sup>
- Genus XII. *Marinococcus*<sup>VP</sup>
- Genus XIII. *Oceanobacillus*<sup>VP</sup>
- Genus XIV. *Paralobacillus*<sup>VP</sup>
- Genus XV. *Pontibacillus*<sup>VP</sup>
- Genus XVI. *Saccharococcus*<sup>VP</sup>
- Genus XVII. *Tenuibacillus*<sup>VP</sup>
- Genus XVIII. *Thalassobacillus*<sup>VP</sup>
- Genus XIX. *Virgibacillus*<sup>VP</sup>

##### Family II. “*Alicyclobacillaceae*”

- Genus I. *Alicyclobacillus*<sup>VP (T)</sup>

##### Family III. “*Listeriaceae*”

- Genus I. *Listeria*<sup>AL (T)</sup>
- Genus II. *Brochothrix*<sup>AL</sup>

##### Family IV. “*Paenibacillaceae*”

- Genus I. *Paenibacillus*<sup>VP (T)</sup>
- Genus II. *Ammoniphilus*<sup>VP</sup>
- Genus III. *Aneurinibacillus*<sup>VP</sup>
- Genus IV. *Brevibacillus*<sup>VP</sup>
- Genus V. *Cohnella*<sup>VP</sup>
- Genus VI. *Oxalophagus*<sup>VP</sup>
- Genus VII. *Thermobacillus*<sup>VP</sup>

##### Family V. *Pasteuriaceae*<sup>AL</sup>

- Genus I. *Pasteuria*<sup>AL (T)</sup>

##### Family VI. *Planococcaceae*<sup>AL</sup>

- Genus I. *Planococcus*<sup>AL (T)</sup>
- Genus II. *Caryophanon*<sup>VP</sup>
- Genus III. *Filibacter*<sup>VP</sup>
- Genus IV. *Jeotgalibacillus*<sup>VP</sup>
- Genus V. *Kurthia*<sup>AL</sup>
- Genus VI. *Marinibacillus*<sup>VP</sup>

- Genus VII. *Planomicrobium*<sup>VP</sup>

- Genus VIII. *Sporosarcina*<sup>AL</sup>

- Genus IX. *Ureibacillus*<sup>VP</sup>

##### Family VII. “*Sporolactobacillaceae*”

- Genus I. *Sporolactobacillus*<sup>AL (T)</sup>

##### Family VIII. “*Staphylococcaceae*”

- Genus I. *Staphylococcus*<sup>AL (T)</sup>

- Genus II. *Jeotgalicoccus*<sup>VP</sup>

- Genus III. *Macrococcus*<sup>VP</sup>

- Genus IV. *Salinicoccus*<sup>VP</sup>

##### Family IX. “*Thermoactinomycetaceae*”

- Genus I. *Thermoactinomyces*<sup>AL (T)</sup>

- Genus II. *Laceyella*<sup>VP</sup>

- Genus III. *Mechercharimyces*<sup>VP</sup>

- Genus IV. *Planifilum*<sup>VP</sup>

- Genus V. *Seinonella*<sup>VP</sup>

- Genus VI. *Shimazuella*<sup>VP</sup>

- Genus VII. *Thermoflavimicrobium*<sup>VP</sup>

##### Family X. *Incertae Sedis*

- Genus I. *Thermicanus*<sup>VP</sup>

##### Family XI. *Incertae Sedis*

- Genus I. *Gemella*<sup>AL</sup>

##### Family XII. *Incertae Sedis*

- Genus I. *Exiguobacterium*<sup>VP</sup>

#### Order II. “*Lactobacillales*”

##### Family I. *Lactobacillaceae*<sup>AL</sup>

- Genus I. *Lactobacillus*<sup>AL (T)</sup>

- Genus II. *Paralactobacillus*<sup>VP</sup>

- Genus III. *Pediococcus*<sup>AL</sup>

##### Family II. “*Aerococcaceae*”

- Genus I. *Aerococcus*<sup>AL (T)</sup>

- Genus II. *Abiotrophia*<sup>VP</sup>

- Genus III. *Dolosicoccus*<sup>VP</sup>

- Genus IV. *Eremococcus*<sup>VP</sup>

- Genus V. *Facklamia*<sup>VP</sup>

- Genus VI. *Globicatella*<sup>VP</sup>

- Genus VII. *Ignavigranum*<sup>VP</sup>

##### Family III. “*Carnobacteriaceae*”

- Genus I. *Carnobacterium*<sup>VP (T)</sup>

- Genus II. *Alkalibacterium*<sup>VP</sup>

- Genus III. *Allofustis*<sup>VP</sup>

- Genus IV. *Alloiococcus*<sup>VP</sup>

- Genus V. *Atopobacter*<sup>VP</sup>

- Genus VI. *Atopococcus*<sup>VP</sup>

- Genus VII. *Atopostipes*<sup>VP</sup>

- Genus VIII. *Desemzia*<sup>VP</sup>  
 Genus IX. *Dolosigranulum*<sup>VP</sup>  
 Genus X. *Granulicatella*<sup>VP</sup>  
 Genus XI. *Isobaculum*<sup>VP</sup>  
 Genus XII. *Marinilactibacillus*<sup>VP</sup>  
 Genus XIII. *Trichococcus*<sup>VP</sup>
- Family IV. “*Enterococcaceae*”  
 Genus I. *Enterococcus*<sup>VP (T)</sup>  
 Genus II. *Melissococcus*<sup>VP</sup>  
 Genus III. *Tetragenococcus*<sup>VP</sup>  
 Genus IV. *Vagococcus*<sup>VP</sup>
- Family V. “*Leuconostocaceae*”  
 Genus I. *Leuconostoc*<sup>AL (T)</sup>  
 Genus II. *Oenococcus*<sup>VP</sup>  
 Genus III. *Weissella*<sup>VP</sup>
- Family VI. *Streptococcaceae*<sup>AL</sup>  
 Genus I. *Streptococcus*<sup>AL (T)</sup>  
 Genus II. *Lactococcus*<sup>VP</sup>  
 Genus III. *Lactovum*<sup>VP</sup>
- Class II. “*Clostridia*”  
 Order I. *Clostridiales*<sup>AL (T)</sup>  
 Family I. *Clostridiaceae*<sup>AL</sup>  
 Genus I. *Clostridium*<sup>AL (T)</sup>  
 Genus II. *Alkaliphilus*<sup>VP</sup>  
 Genus III. *Anaerobacter*<sup>VP</sup>  
 Genus IV. *Anoxyratronum*<sup>VP</sup>  
 Genus V. *Caloramator*<sup>VP</sup>  
 Genus VI. *Caloranaerobacter*<sup>VP</sup>  
 Genus VII. *Caminicella*<sup>VP</sup>  
 Genus VIII. *Natronincola*<sup>VP</sup>  
 Genus IX. *Oxobacter*<sup>VP</sup>  
 Genus X. *Sarcina*<sup>AL</sup>  
 Genus XI. *Thermobrachium*<sup>VP</sup>  
 Genus XII. *Thermohalobacter*<sup>VP</sup>  
 Genus XIII. *Tindallia*<sup>VP</sup>
- Family II. “*Eubacteriaceae*”  
 Genus I. *Eubacterium*<sup>AL (T)</sup>  
 Genus II. *Acetobacterium*<sup>AL</sup>  
 Genus III. *Alkalibacter*<sup>VP</sup>  
 Genus IV. *Anaerofustis*<sup>VP</sup>  
 Genus V. *Garciella*<sup>VP</sup>  
 Genus VI. *Pseudoramibacter*<sup>VP</sup>
- Family III. “*Gracilibacteraceae*”  
 Genus I. *Gracilibacter*<sup>VP (T)</sup>
- Family IV. “*Heliobacteriaceae*”  
 Genus I. *Heliobacterium*<sup>VP (T)</sup>  
 Genus II. *Heliobacillus*<sup>VP</sup>  
 Genus III. *Heliophilum*<sup>VP</sup>  
 Genus IV. *Heliorestis*<sup>VP</sup>
- Family V. “*Lachnospiraceae*”  
 Genus I. *Lachnospira*<sup>AL (T)</sup>  
 Genus II. *Acetitomaculum*<sup>VP</sup>  
 Genus III. *Anaerostipes*<sup>VP</sup>  
 Genus IV. *Bryantella*<sup>VP</sup>  
 Genus V. *Butyrivibrio*<sup>AL</sup>  
 Genus VI. *Catonella*<sup>VP</sup>  
 Genus VII. *Coproccoccus*<sup>AL</sup>  
 Genus VIII. *Dorea*<sup>VP</sup>  
 Genus IX. *Hespellia*<sup>VP</sup>  
 Genus X. *Johnsonella*<sup>VP</sup>
- Genus XI. *Lachnobacterium*<sup>VP</sup>  
 Genus XII. *Moryella*<sup>VP</sup>  
 Genus XIII. *Oribacterium*<sup>VP</sup>  
 Genus XIV. *Parasporobacterium*<sup>VP</sup>  
 Genus XV. *Pseudobutyrvibrio*<sup>VP</sup>  
 Genus XVI. *Roseburia*<sup>VP</sup>  
 Genus XVII. *Shuttleworthia*<sup>VP</sup>  
 Genus XVIII. *Sporobacterium*<sup>VP</sup>  
 Genus XIX. *Syntrophococcus*<sup>VP</sup>
- Family VI. *Peptococcaceae*<sup>AL</sup>  
 Genus I. *Peptococcus*<sup>AL (T)</sup>  
 Genus II. *Cryptanaerobacter*<sup>VP</sup>  
 Genus III. *Dehalobacter*<sup>VP</sup>  
 Genus IV. *Desulfitobacterium*<sup>VP</sup>  
 Genus V. *Desulfonispota*<sup>VP</sup>  
 Genus VI. *Desulfosporosinus*<sup>VP</sup>  
 Genus VII. *Desulfotomaculum*<sup>VP</sup>  
 Genus VIII. *Pelotomaculum*<sup>VP</sup>  
 Genus IX. *Sporotomaculum*<sup>VP</sup>  
 Genus X. *Syntrophobotulus*<sup>VP</sup>  
 Genus XI. *Thermincola*<sup>VP</sup>
- Family VII. “*Peptostreptococcaceae*”  
 Genus I. *Peptostreptococcus*<sup>AL (T)</sup>  
 Genus II. *Filifactor*<sup>VP</sup>  
 Genus III. *Tepidibacter*<sup>VP</sup>
- Family VIII. “*Ruminococcaceae*”  
 Genus I. *Ruminococcus*<sup>AL (T)</sup>  
 Genus II. *Acetanaerobacterium*<sup>VP</sup>  
 Genus III. *Acetivibrio*<sup>VP</sup>  
 Genus IV. *Anaerofilum*<sup>VP</sup>  
 Genus V. *Anaerotruncus*<sup>VP</sup>  
 Genus VI. *Faecalibacterium*<sup>VP</sup>  
 Genus VII. *Fastidiosipila*<sup>VP</sup>  
 Genus VIII. *Oscillospira*<sup>AL</sup>  
 Genus IX. *Papillibacter*<sup>VP</sup>  
 Genus X. *Sporobacter*<sup>VP</sup>  
 Genus XI. *Subdoligranulum*<sup>VP</sup>
- Family IX. *Syntrophomonadaceae*<sup>VP</sup>  
 Genus I. *Syntrophomonas*<sup>VP (T)</sup>  
 Genus II. *Pelospora*<sup>VP</sup>  
 Genus III. *Syntrophospora*<sup>VP</sup>  
 Genus IV. *Syntrophothermus*<sup>VP</sup>  
 Genus V. *Thermosyntrophus*<sup>VP</sup>
- Family X. *Veillonellaceae*<sup>VP</sup>  
 Genus I. *Veillonella*<sup>AL (T)</sup>  
 Genus II. *Acetonema*<sup>VP</sup>  
 Genus III. *Acidaminococcus*<sup>AL</sup>  
 Genus IV. *Allisonella*<sup>VP</sup>  
 Genus V. *Anaerococcus*<sup>VP</sup>  
 Genus VI. *Anaeroglobus*<sup>VP</sup>  
 Genus VII. *Anaeromusa*<sup>VP</sup>  
 Genus VIII. *Anaerobaculum*<sup>VP</sup>  
 Genus IX. *Anaerovibrio*<sup>AL</sup>  
 Genus X. *Centipeda*<sup>VP</sup>  
 Genus XI. *Dendrosporobacter*<sup>VP</sup>  
 Genus XII. *Dialister*<sup>VP</sup>  
 Genus XIII. *Megasphaera*<sup>AL</sup>  
 Genus XIV. *Mitsuokella*<sup>VP</sup>  
 Genus XV. *Pectinatus*<sup>AL</sup>  
 Genus XVI. *Phascolarctobacterium*<sup>VP</sup>

- Genus XVII. *Propionispira*<sup>VP</sup>
- Genus XVIII. *Propionispora*<sup>VP</sup>
- Genus XIX. *Quinella*<sup>VP</sup>
- Genus XX. *Schwartzia*<sup>VP</sup>
- Genus XXI. *Selenomonas*<sup>AL</sup>
- Genus XXII. *Sporomusa*<sup>VP</sup>
- Genus XXIII. *Succiniclasticum*<sup>VP</sup>
- Genus XXIV. *Succinispira*<sup>VP</sup>
- Genus XXV. *Thermosinus*<sup>VP</sup>
- Genus XXVI. *Zymophilus*<sup>VP</sup>
- Family XI. *Incertae Sedis*
  - Genus I. *Anaerococcus*<sup>VP</sup>
  - Genus II. *Fingoldia*<sup>VP</sup>
  - Genus III. *Gallicola*<sup>VP</sup>
  - Genus IV. *Helcococcus*<sup>VP</sup>
  - Genus V. *Parvimonas*<sup>VP</sup>
  - Genus VI. *Peptoniphilus*<sup>VP</sup>
  - Genus VII. *Sedimentibacter*<sup>VP</sup>
  - Genus VIII. *Soehngenia*<sup>VP</sup>
  - Genus IX. *Sporanaerobacter*<sup>VP</sup>
  - Genus X. *Tissierella*<sup>VP</sup>
- Family XII. *Incertae Sedis*
  - Genus I. *Acidaminobacter*<sup>VP</sup>
  - Genus II. *Fusibacter*<sup>VP</sup>
  - Genus III. *Guggenheimella*<sup>VP</sup>
- Family XIII. *Incertae Sedis*
  - Genus I. *Anaerovorax*<sup>VP</sup>
  - Genus II. *Mogibacterium*<sup>VP</sup>
- Family XIV. *Incertae Sedis*
  - Genus I. *Anaerobranca*<sup>VP</sup>
- Family XV. *Incertae Sedis*
  - Genus I. *Aminobacterium*<sup>VP</sup>
  - Genus II. *Aminomonas*<sup>VP</sup>
  - Genus III. *Anaerobaculum*<sup>VP</sup>
  - Genus IV. *Dethiosulfovibrio*<sup>VP</sup>
  - Genus V. *Thermanaerovibrio*<sup>VP</sup>
- Family XVI. *Incertae Sedis*
  - Genus I. *Carboxydocella*<sup>VP</sup>
- Family XVII. *Incertae Sedis*
  - Genus I. *Sulfobacillus*<sup>VP</sup>
  - Genus II. *Thermaerobacter*<sup>VP</sup>
- Family XVIII. *Incertae Sedis*
  - Genus I. *Symbiobacterium*<sup>VP</sup>
- Family XIX. *Incertae Sedis*
  - Genus I. *Acetoanaerobium*<sup>VP</sup>

- Order II. *Halanaerobiales*<sup>VP</sup>
  - Family I. *Halanaerobiaceae*<sup>VP</sup>
    - Genus I. *Halanaerobium*<sup>VP (T)</sup>
    - Genus II. *Halocella*<sup>VP</sup>
    - Genus III. *Halothermothrix*<sup>VP</sup>
  - Family II. *Halobacteroidaceae*<sup>VP</sup>
    - Genus I. *Halobacteroides*<sup>VP (T)</sup>
    - Genus II. *Acetohalobium*<sup>VP</sup>
    - Genus III. *Halanaerobacter*<sup>VP</sup>
    - Genus IV. *Halonatronum*<sup>VP</sup>
    - Genus V. *Natroniella*<sup>VP</sup>
    - Genus VI. *Orenia*<sup>VP</sup>
    - Genus VII. *Selenihalanaerobacter*<sup>VP</sup>
    - Genus VIII. *Sporohalobacter*<sup>VP</sup>
- Order III. “*Thermoanaerobacterales*”
  - Family I. “*Thermoanaerobacteraceae*”
    - Genus I. *Thermoanaerobacter*<sup>VP (T)</sup>
    - Genus II. *Ammonifex*<sup>VP</sup>
    - Genus III. *Caldanaerobacter*<sup>VP</sup>
    - Genus IV. *Carboxydotherrmus*<sup>VP</sup>
    - Genus V. *Gebria*<sup>VP</sup>
    - Genus VI. *Moorella*<sup>VP</sup>
    - Genus VII. *Thermacetogenium*<sup>VP</sup>
    - Genus VIII. *Thermanaeromonas*<sup>VP</sup>
  - Family II. *Thermodesulfobiaceae*<sup>VP</sup>
    - Genus I. *Thermodesulfobium*<sup>VP (T)</sup>
    - Genus II. *Coprothermobacter*<sup>VP</sup>
  - Family III. *Incertae Sedis*
    - Genus I. *Caldicellulosiruptor*<sup>VP</sup>
    - Genus II. *Thermoanaerobacterium*<sup>VP</sup>
    - Genus III. *Thermosediminibacter*<sup>VP</sup>
    - Genus IV. *Thermovenabulum*<sup>VP</sup>
  - Family IV. *Incertae Sedis*
    - Genus I. *Mahella*<sup>VP</sup>
- Class III. “*Erysipelotrichia*”
  - Order I. “*Erysipelotrichales*<sup>(T)</sup>”
    - Family I. *Erysipelotrichaceae*<sup>VP</sup>
      - Genus I. *Erysipelothrix*<sup>AL (T)</sup>
      - Genus II. *Allobaculum*<sup>VP</sup>
      - Genus III. *Bulleidia*<sup>VP</sup>
      - Genus IV. *Catenibacterium*<sup>VP</sup>
      - Genus V. *Coprobacillus*<sup>VP</sup>
      - Genus VI. *Holdemania*<sup>VP</sup>
      - Genus VII. *Solobacterium*<sup>VP</sup>
      - Genus VIII. *Turicibacter*<sup>VP</sup>

Bergey's Manual of Systematic Bacteriology

Volume 3: The Firmicutes

Vos, P.; Garrity, G.; Jones, D.; Krieg, N.R.; Ludwig, W.;

Rainey, F.A.; Schleifer, K.-H.; Whitman, W. (Eds.)

2009, LII, 1450 p. In 2 volumes, not available

separately., Hardcover

ISBN: 978-0-387-95041-9