Index of the Bacterial and Yeast Nomenclatural Changes Published in the *International Journal of Systematic Bacteriology* Since the 1980 Approved Lists of Bacterial Names (1 January 1980 to 1 January 1985)

W. E. C. MOORE,* ELIZABETH P. CATO, AND LILLIAN V. H. MOORE

Department of Anaerobic Microbiology, Virginia Polytechnic Institute and State University, Blacksburg, Virginia 24060

The following list includes the official nomenclature of bacteria and yeasts recognized by the International Committee on Systematic Bacteriology as published or validated in the *International Journal of Systematic Bacteriology* (IJSB) according to the International Code of Nomenclature of Bacteria (ICNB), Rule 27. References to nomenclature established by the 1980 Approved Lists of Bacterial Names are designated by (AL). Except where noted, all references pertain to IJSB. References to original refereed articles published in IJSB are marked with an asterisk (*). References to names that appear only on validation lists give only the year, volume, and page number without special designations.

The validity of species is not guaranteed by inclusion in these lists. However, the priority of the name is established by the date and page of publication in IJSB either as an original article or by mention in the validation lists (ICNB Rule 27). As far as possible, the citations of names are in the correct format according to the code and may differ from those used by the original authors. Basonyms are included to clarify the previous names or histories of individual taxa. Annotations are made to clarify the rules or rationale for some of the nomenclatural changes in this index. We would appreciate factual information concerning any errors or corrections for this list.

Abbreviations and addresses of collections from which designated type strains are available (ICNB Recommendation 30A) are listed alphabetically at the end of the list. We thank Bobbie Brandon of the American Type Culture Collection for helping to provide complete addresses for the culture collections.

Reprints of this publication are available for \$3.00 each (U.S.) (prepaid) from the American Society for Microbiology, Publications Sales, 1913 I Street, N.W., Washington, DC 20006.

- Acetivibrio* Patel, Khan, Agnew, and Colvin 1980, 30:184,* gen. nov. Type species: *A. cellulolyticus*.
- Acetivibrio cellulolyticus* Patel, Kahn, Agnew, and Colvin 1980, 30:184,* sp. nov. Type strain: CD2 = NRC 2248 = ATCC 33288.
- Acetivibrio cellulosolvens* Khan, Meek, Sowden, and Colvin 1984, 34:420,* sp. nov. Type strain: BAS = NRC 2936.
- Acetivibrio ethanolgignens* Robinson and Ritchie 1981, 31:335,* sp. nov. Type strain: 77-6 = ATCC 33324.
- Acetobacter aceti* subsp. *liquefaciens* (Asai 1935) De Ley and Frateur 1974 (AL) = *Acetobacter liquefaciens*, 33:896.
- Acetobacter hansenii* Gossele, Swings, Kersters, Pauwels, and De Ley 1983, 33:896, sp. nov. Type strain: NCIB 8746.
- Acetobacter liquefaciens* (Asai 1935) Gossele, Swings, Kersters, Pauwels, and De Ley 1983, 33:896, comb. nov. [basonym: *Acetobacter aceti* subsp. *liquefaciens* (AL)]. Type strain: IAM 1834 = IFO 12388 = ATCC 14835.
- Acetobacter liquefaciens* (Asai 1935) Yamada and Tahara 1984, 34:270, comb. nov. [basonym: *Acetobacter aceti* subsp. *liquefaciens* (AL)]. Type strain: ATCC 14835 = IAM 1834 = IFO 12388. See *Acetobacter liquefaciens* (Asai 1935) Gossele, Swings, Kersters, Pauwels, and De Ley 1983, which has precedence.
- Acetobacter xylinum* Yamada 1984, 34:270, sp. nov., nom. rev. (basonym: "*Acetobacter xylinus*" [sic] Yamada 1983). Type strain: NCIB 11664.
- Acetobacterium wieringae* Braun and Gottschalk 1983, 33:438, sp. nov. Type strain: C = DSM 1911.
- Acetogenium* Leigh and Wolfe 1983, 33:886,* gen. nov. Type species: *A. kivui*.
- Acetogenium kivui* Leigh and Wolfe 1983, 33:886,* sp. nov. Type strain: ATCC 33488 = DSM 2030.
- Acholeplasma florum* McCoy, Basham, Tully, Rose, Carle, and Bove 1984, 34:14,* sp. nov. Type strain: L1 = ATCC 33453.
- Acholeplasma morum* Rose, Tully, and Del Giudice 1980, 30:653,* sp. nov. Type strain: 72-043 = ATCC 33211.
- Acholeplasma parvum* Atobe, Watabe, and Ogata 1983, 33:348,* sp. nov. Type strain: H23M = ATCC 29892.
- Acholeplasmatales* Freundt, Whitcomb, Barile, Razin, and Tully 1984, 34:348,* ord. nov. Type family: *Acholeplasmataceae*; type genus: *Acholeplasma*.
- Achromobacter* Yabuuchi and Yano 1981, 31:478,* gen. nov. Type species: *A. xylosoxidans*.
- Achromobacter xylosoxidans* Yabuuchi and Yano 1981, 31:477,* sp. nov., nom. rev. (basonym: "*Achromobacter xylosoxidans*" Yabuuchi and Ohyama 1971). Type strain: ATCC 27061 = *Alcaligenes denitrificans* subsp. *xylosoxidans*, 34:355.
- Acidiphilium* Harrison 1981, 31:331,* gen. nov. Type species: *A. cryptum*.
- * Corresponding author.

- Acidiphilium cryptum* Harrison 1981, 31:331,* sp. nov. Type strain Lhet2 = ATCC 33463.
- Actinobacillus pleuropneumoniae* (Shope 1964) Pohl, Bertschinger, Frederiksen, and Mannheim 1983, 33:513,* comb. nov. [basonym: *Haemophilus pleuropneumoniae* (AL), 34:509*]. Type strain: Shope 4074 = CCM 5869 = ATCC 27088.
- Actinomadura ferruginea* Meyer 1981, 31:215, sp. nov. Type strain: IMET 9567.
- Actinomadura kijaniata* Horan and Brodsky 1982, 32:198,* sp. nov. Type strain: SCC 1256 = ATCC 31588.
- Actinomadura libanotica* Meyer 1981, 31:215, sp. nov. Type strain: IMET 9616.
- Actinomadura macra* Huang 1980, 30:567,* sp. nov. Type strain: Pfizer FD 25934 = ATCC 31286.
- Actinomadura spiralis* Meyer 1981, 31:215, sp. nov. Type strain: IMET 9621.
- Actinomyces denticolens* Dent and Williams 1984, 34:503, sp. nov. Type strain: Sh 8/4303 = NCTC 11490.
- Actinomyces hordeovulneris* Buchanan, Scott, Gerencser, Beaman, Jang, and Biberstein 1984, 34:442,* sp. nov. Type strain: UCD 81-332-9 = ATCC 35275.
- Actinomyces howellii* Dent and Williams 1984, 34:319,* sp. nov. Type strain: Sh 7/4276 = NCTC 11636.
- Actinomyces meyeri* Cato, Moore, Nygaard, and Holdeman 1984, 34:487,* sp. nov., nom. rev., comb. nov. (basonym: "*Actinobacterium meyeri*" Prevot 1938). Type strain: Prevot 2477B = VPI 8617 = ATCC 35568.
- Actinomyces pyogenes* (Glage 1903) Reddy, Cornell, and Fraga 1982, 32:427,* comb. nov. [basonym: *Corynebacterium pyogenes* (AL)]. Type strain: C-100 = NCTC 5224 = ATCC 19411.
- Actinomyces pyogenes* (Glage 1903) Collins and Jones 1983, 33:438, comb. nov. [basonym: *Corynebacterium pyogenes* (AL)]. Type strain: ATCC 19411. See *Actinomyces pyogenes* (Glage 1903) Reddy, Cornell, and Fraga 1982, which has precedence.
- Actinoplanes armeniacus* Kalakoutskii and Kusnetsov 1964 (AL) = *Streptomyces armeniacus*, 31:80.*
- Actinosporangium vitaminophilum* Shomura, Amano, Yoshida, Ezaki, Ito, and Niida 1983, 33:563,* sp. nov. Type strain: SF-2080 = ATCC 31673.
- Actinosynnema pretiosum* subsp. *auranticum* Hasegawa, Tanida, Hatano, Higashide, and Yoneda 1983, 33:320,* subsp. nov. Type strain: C14882(N-1001) = FERM-P 4130 = IFO 13725 = ATCC 31309.
- Actinosynnema pretiosum* subsp. *pretiosum* Hasegawa, Tanida, Hatano, Higashide, and Yoneda 1983, 33:318,* sp. nov., subsp. nov. Type strain: C15003(N-1) = FERM-P 3992 = IFO 13726 = ATCC 31281.
- Aeromonas caviae* Popoff 1984, 34:355, sp. nov., nom. rev. (basonym: "*Aeromonas caviae*" Eddy 1962). Type strain: ATCC 15468.
- Aeromonas media* Allen, Austin, and Colwell 1983, 33:603,* sp. nov. Type strain: Rm = ATCC 33907.
- Aeromonas sobria* Popoff and Veron 1981, 31:215, sp. nov. Type strain: 208 = CIP 7433.
- Agitococcus* Franzmann and Skerman 1981, 31:182,* gen. nov. Type species: *A. lubricus*.
- Agitococcus lubricus* Franzmann and Skerman 1981, 31:182,* sp. nov. Type strain: UQM 1981.
- Alcaligenes aestus* Baumann, Baumann, Mandel, and Allen 1972 (AL) = *Deleya aesta*, 33:801.*
- Alcaligenes cupidus* Baumann, Baumann, Mandel, and Allen 1972 (AL) = *Deleya cupida*, 33:801.*
- Alcaligenes denitrificans* Ruger and Tan 1983, 33:88,* sp. nov. nom. rev. (basonym: "*Alcaligenes denitrificans*" Liefson and Hugh 1954). Type strain: NCTC 8582.
- Alcaligenes denitrificans* subsp. *xylosoxydans* (Yabuuchi and Yano 1981) Kersters and De Ley 1984, 34:355, comb. nov. (basonym: *Achromobacter xylosoxydans* 31:477*). Type strain: ATCC 27061.
- Alcaligenes faecalis* subsp. *homari* Austin, Rodgers, Forns, and Colwell 1981, 31:75,* subsp. nov. Type strain: L1 = NCMB 2116 = ATCC 33127.
- Alcaligenes pacificus* Baumann, Baumann, Mandel, and Allen 1972 (AL) = *Deleya pacifica*, 33:801.*
- Alcaligenes venustus* Baumann, Baumann, Mandel, and Allen 1972 (AL) = *Deleya venusta*, 33:801.*
- Allomonas kalina*, Antonov, Turova, and Grafova 1984, 34:152,* gen. nov. Type species: *A. enterica*.
- Allomonas enterica* Kalina, Antonov, Turova, and Grafova 1984, 34:152,* sp. nov. Type strain: 40 = BKM B1485.
- Alteromonas communis* Baumann, Baumann, Mandel, and Allen 1972 (AL) = *Marinomonas communis*, 34:91, = *Oceanospirillum commune*, 34:503.
- Alteromonas hanedai* Jensen, Tebo, Baumann, Mandel, and Nealson 1981, 31:382, sp. nov. Type strain 281 = ATCC 33224.
- Alteromonas luteoviolacea* Gauthier 1982, 32:85,* sp. nov. nom. rev. (basonym: "*Alteromonas luteo-violaceus*" [sic] Gauthier 1976). Type strain: CH130 = ATCC 33492.
- Alteromonas nigrifaciens* Baumann, Baumann, Bowditch, and Beaman 1984, 34:146,* sp. nov., nom. rev. (basonym: "*Pseudomonas nigrifaciens*" White 1940). Type strain 217 = ATCC 19375.
- Alteromonas putrefaciens* Lee, Gibson, and Shewan 1981, 31:215, sp. nov. Type strain: Hammer 95 = NCIB 10471 = ATCC 8071.
- Alteromonas vega* Baumann, Baumann, Mandel, and Allen 1972 (AL) = *Marinomonas vega*, 34:91, = *Oceanospirillum vagum*, 34:503.
- Anaplasma caudatum* Ristic and Kreier 1984, 34:355, sp. nov. Type strain: No culture isolated.
- Anaplasma centrale* Ristic and Kreier 1984, 34:355, sp. nov., nom. rev. (basonym: "*Anaplasma centrale*" Theiler 1911). Type strain: no culture isolated.
- Ancylobacter* Raj 1983, 33:397,* gen. nov. [synonym: *Microcylus* (AL). Fungal *Microcylus* has precedence; Rule 51B(4)]. Type species: *A. aquaticus*.
- Ancylobacter aquaticus* (Orskov 1928) Raj 1983, 33:397,* comb. nov. [basonym: *Microcylus aquaticus* (AL)]. Type strain: Orskov = ATCC 25396.
- Angiococcus* Hook, Larkin, and Brockman 1980, 30:142,* gen. nov., nom. rev. (basonym: "*Angiococcus*" Jahn 1924). Type species: *A. disciformis*.
- Angiococcus disciformis* (Thaxter 1904) Hook, Larkin, and Brockman 1980, 30:142,* comb. nov. [basonym:

- Myxococcus disciformis* (AL)]. Type strain: CMU-1 = ATCC 33172.
- Aquaspirillum magnetotacticum* Maratea and Blakemore 1981, 31:454,* sp. nov. Type strain: MS-1 = ATCC 31632.
- Arcanobacterium* Collins, Jones, and Schofield 1983, 33:438, gen. nov. Type species: *A. haemolyticum*.
- Arcanobacterium haemolyticum* Collins, Jones, and Schofield 1983, 33:438, sp. nov., nom. rev., comb. nov. (basonym: "*Corynebacterium hemolyticum*" [sic] MacLean, Liebow, and Rosenberg 1946). Type strain: ATCC 9345.
- Arthrobacter flavescens* Lochhead 1958 (AL) = *Aureobacterium flavescens*, 33:672.
- Arthrobacter ilicis* (Mandel, Guba, and Litsky 1961) Collins, Jones, and Kroppenstedt 1982, 32:384, comb. nov. [basonym: *Corynebacterium ilicis* (AL)]. Type strain: NCPPB 1228 = ATCC 14264.
- Arthrobacter protophormiae* (Lysenko 1959) Stackebrandt, Fowler, Fiedler, and Seiler 1984, 34:270, comb. nov. [basonym: *Brevibacterium protophormiae* (AL)]. Type strain: DSM 20168 = ATCC 19271.
- Arthrobacter simplex* (Jensen 1934) Lochhead 1957 (AL) = *Pimelobacter simplex*, 33:673, = *Nocardioides simplex*, 33:896.
- Arthrobacter sulfureus* Stackebrandt, Fowler, Fiedler, and Seiler 1984, 34:270, sp. nov. Type strain: DSM 20167 = ATCC 19098.
- Arthrobacter tumescens* (Jensen 1934) Conn and Dimmick 1947 (AL) = *Pimelobacter tumescens*, 33:673.
- Arthrobacter uratoxydans* Stackebrandt, Fowler, Fiedler, and Seiler 1984, 34:270, sp. nov. Type strain: ATCC 21749.
- Aureobacterium* Collins, Jones, Keddle, Kroppenstedt, and Schleifer 1983, 33:672, gen. nov. Type species: *A. liquefaciens*.
- Aureobacterium barkeri* Collins, Jones, Keddle, Kroppenstedt, and Schleifer 1983, 33:672, comb. nov., nom. rev. (basonym: "*Corynebacterium barkeri*" Dias, Bilimarić, and Bhat 1962). Type strain: NCIB 9658.
- Aureobacterium flavescens* (Lochhead 1958) Collins, Jones, Keddle, Kroppenstedt, and Schleifer 1983, 33:672, comb. nov. [basonym: *Arthrobacter flavescens* (AL)]. Type strain: NCIB 9221 = ATCC 13348.
- Aureobacterium liquefaciens* Collins, Jones, Keddle, Kroppenstedt, and Schleifer 1983, 33:672, comb. nov., nom. rev. [basonym: "*Microbacterium liquefaciens*" (Orla-Jensen 1919) Abd-el-Malek and Gibson 1952]. Type strain: NCIB 11509.
- Aureobacterium saperdae* (Lysenko 1959) Collins, Jones, Keddle, Kroppenstedt, and Schleifer 1983, 33:672, comb. nov. [basonym: *Curtobacterium saperdae* (AL)]. Type strain: CCEB 366 = ATCC 19272.
- Aureobacterium terregens* (Lochhead and Burton 1953) Collins, Jones, Keddle, Kroppenstedt, and Schleifer 1983, 33:672, comb. nov. [basonym: *Arthrobacter terregens* (AL)]. Type strain: NCIB 8909 = ATCC 13345.
- Aureobacterium testaceum* (Komagata and Iizuka 1964) Collins, Jones, Keddle, Kroppenstedt, and Schleifer 1983, 33:672, comb. nov. [basonym: *Curtobacterium testaceum* (AL)]. Type strain: ATCC 15829.
- Azomonas macrocytogenes* (Jensen 1955) New and Tchan 1982, 32:381,* sp. nov., comb. nov. [basonym: *Azotobacter macrocytogenes* (AL)]. Type strain: O of Jensen = WR-111 = NCIB 8700 = ATCC 12335.
- Azomonotrichon* Thompson and Skerman 1981, 31:215, gen. nov. Type species: *A. macrocytogenes* = *Azomonas macrocytogenes* (AL), 32:381.*
- Azomonotrichon macrocytogenes* (Jensen 1955) Thompson and Skerman 1981, 31:215, = *Azomonas macrocytogenes*, 32:381.*
- Azorhizophilus* Thompson and Skerman 1981, 31:215, gen. nov. Type species: *A. paspali*.
- Azorhizophilus paspali* (Dobereiner 1966) Thompson and Skerman 1981, 31:215, comb. nov. [basonym: *Azotobacter paspali* (AL)]. Type strain: Ax-8 of Dobereiner = WR-129 = ATCC 23833.
- Azospirillum amazonense* Magalhaes, Baldani, Souto, Kuykendall, and Dobereiner 1984, 34:355, sp. nov. Type strain: Am 14(Y1) = ATCC 35119.
- Azotobacter armeniacus* Thompson and Skerman 1981, 31:215, sp. nov. Type strain: N28 of Kirakosyan = WR-136.
- Azotobacter macrocytogenes* Jensen 1955 (AL) = *Azomonotrichon macrocytogenes*, 31:215, = *Azomonas macrocytogenes*, 32:381.*
- Azotobacter nigricans* subsp. *achromogenes* Thompson and Skerman 1981, 31:215, subsp. nov. Type strain: A-2 of Jensen = WR-41.
- Azotobacter paspali* Dobereiner 1966 (AL) = *Azorhizophilus paspali*, 31:215.
- Bacillus amylolyticus* Nakamura 1984, 34:224,* sp. nov., nom. rev. (basonym: "*Bacillus amylolyticus*" Choukevitch 1911). Type strain: NRRL NRS-290.
- Bacillus azotofixans* Seldin, Van Elsas, and Penido 1984, 34:453,* sp. nov. Type strain: P3L-5 = ATCC 35681.
- Bacillus azotoformans* Pichinoty, de Barjac, Mandel, and Asselineau 1983, 33:660,* sp. nov., nom. rev. (basonym: "*Bacillus azotoformans*" Pichinoty, de Barjac, Mandel, Greenway, and Garcia 1976). Type strain: 1 = CCM 2849 = CIP R925 = ATCC 29788.
- Bacillus globisporus* subsp. *marinus* Ruger and Richter 1979 (AL) = *Bacillus marinus*, 33:159.*
- Bacillus lautus* Nakamura 1984, 34:225,* sp. nov., nom. rev. (basonym: "*Bacillus lautus*" Batchelor 1919). Type strain: NRRL NRS-666.
- Bacillus marinus* (Ruger and Richter 1979) Ruger 1983, 33:159,* comb. nov. emend. [basonym: *Bacillus globisporus* subsp. *marinus* (AL)]. Type strain: DSM 1297 = ATCC 29841.
- Bacillus pabuli* Nakamura 1984, 34:225,* sp. nov., nom. rev. (basonym: "*Bacillus pabuli*" Schieblisch 1923). Type strain: NRRL NRS-924.
- Bacillus psychrophilus* Nakamura 1984, 34:122,* sp. nov., nom. rev. (basonym: "*Bacillus psychrophilus*" Larkin and Stokes 1967). Type strain: NRRL NRS-1530.
- Bacillus pulvifaciens* Nakamura 1984, 34:412,* sp. nov., nom. rev. (basonym: "*Bacillus pulvifaciens*" Katznelson 1950). Type strain: NRRL B-3685.
- Bacillus schlegelii* Schenk and Aragno 1981, 31:215, sp. nov. Type strain: MA 48 = DSM 2000.

- Bacillus thermoglucosidasius* Suzuki 1984, **34**:270, sp. nov. Type strain: KP 1006 = DSM 2542.
- Bacillus validus* Nakamura 1984, **34**:225,* sp. nov. nom. rev. (basonym: “*Bacillus validus*” Bredemann and Heigener 1935). Type strain: NRRL NRS-1000.
- Bacterionema* Gilmour, Howell, and Bibby 1961 (AL), **33**:438. (Type species transferred to *Corynebacterium*.)
- Bacterionema matruchotii* (Mendel 1919) Gilmour, Howell, and Bibby 1961 (AL) (type species of the genus) = *Corynebacterium matruchotii*, **33**:438.
- Bacteroides buccae* Holdeman, Moore, Churn, and Johnson 1982, **32**:128,* sp. nov. Type strain: ATCC 33574.
- Bacteroides buccalis* Shah and Collins 1982, **32**:266, sp. nov. Type strain: NCDO 2354.
- Bacteroides capillus* Kornman and Holt 1982, **32**:266, sp. nov. Type strain: 938.11 = ATCC 33690 = *B. buccae*, **35**:114.*
- Bacteroides cellulosolvens* Murray, Sowden, and Colvin 1984, **34**:186,* sp. nov. Type strain: WM2 = NRCC 2944.
- Bacteroides corporis* Johnson and Holdeman 1983, **33**:19,* sp. nov. Type strain: Lambe 532-70A = VPI 9342 = ATCC 33547.
- Bacteroides denticola* Shah and Collins 1982, **32**:266, sp. nov. Type strain: NCDO 2352.
- Bacteroides endodontalis* van Steenberg, van Winkelhoff, Mayrand, Grenier, and de Graaff 1984, **34**:119,* sp. nov. Type strain: HG370 = ATCC 35406.
- Bacteroides gingivalis* Coykendall, Kaczmarek, and Slots 1980, **30**:563,* sp. nov. Type strain: Slots 2561 = ATCC 33277.
- Bacteroides gracilis* Tanner, Badger, Lai, Listgarten, Visconti, and Socransky 1981, **31**:442,* sp. nov. Type strain: FDC 1084 = ATCC 33236.
- Bacteroides helcogenes* Benno, Watabe, and Mitsuoka 1983, **33**:896, sp. nov. Type strain: P 36-108 = DSM 20613.
- Bacteroides hypermegas* Harrison and Hansen 1963 (AL) = *Megamonas hypermegas*, **33**:439.
- Bacteroides intermedius* (Holdeman and Moore) Johnson and Holdeman 1983, **33**:18,* **33**:675,* comb. nov. [basonym: *Bacteroides melaninogenicus* subsp. *intermedius* (AL)]. Type strain: Finegold B422 = VPI 4197 = ATCC 25611.
- Bacteroides levii* Johnson and Holdeman 1983, **33**:21,* sp. nov. Type strain: LEV = ATCC 29147.
- Bacteroides loescheii* Holdeman and Johnson 1982, **32**:406,* sp. nov. Type strain: Loesche 8B = NCTC 11321 = ATCC 15930.
- Bacteroides macacae* (Slots and Genco 1980) Coykendall, Kaczmarek, and Slots 1980, **30**:563,* comb. nov. (basonym: *Bacteroides melaninogenicus* subsp. *macacae* **30**:84*). Type strain: Slots 7728-L6C = ATCC 33141.
- Bacteroides melaninogenicus* (Oliver and Wherry) Roy and Kelly 1939 (AL) (emendation of description) **32**:403.* Type strain: Finegold B282 = VPI 2381 = ATCC 25845.
- Bacteroides melaninogenicus* subsp. *intermedius* Holdeman and Moore 1970 (AL) = *Bacteroides intermedius*, **33**:18.*
- Bacteroides melaninogenicus* subsp. *macacae* Slots and Genco 1980, **30**:84,* subsp. nov. Type strain: Slots 7728-L6C = ATCC 33141 = *Bacteroides macacae*, **30**:563.*
- Bacteroides multiacidus* Mitsuoka, Terada, Watanabe, and Uchida 1974 (AL) = *Mitsuokella multiacidus*, **33**:439.
- Bacteroides ochraceus* Prevot, Joubert, Tardieux, and de Cadore 1956 (AL) = *Capnocytophaga ochracea*, **32**:266.
- Bacteroides oris* Holdeman, Moore, Churn, and Johnson 1982, **32**:126,* sp. nov. Type strain: VPI D1A-1A = ATCC 33573.
- Bacteroides pentosaceus* Shah and Collins 1982, **32**:266, sp. nov. Type strain: NCDO 2353 = *B. buccae* **35**:114.*
- Bacteroides polypragmatus* Patel and Breuil 1982, **32**:266, sp. nov. Type strain: GP4 = NRC 2288.
- Bacteroides pyogenes* Benno, Watabe, and Mitsuoka 1983, **33**:896, sp. nov. Type strain: P 39-88 = DSM 20611.
- Bacteroides suis* Benno, Watabe, and Mitsuoka 1983, **33**:896, sp. nov. Type strain: P 38024 = DSM 20612.
- Bacteroides veroralis* Watabe, Benno, and Mitsuoka 1983, **33**:62,* sp. nov. Type strain: VPI D22A-7 = ATCC 33779.
- Bacteroides zoogloformans* (Weinberg, Nativelle, and Prevot 1937) Cato, Kelley, Moore, and Holdeman 1982, **32**:271,* comb. nov. [basonym: *Capsularis zoogloiformans* (sic). (AL)]. Type strain: VPI D28K-1 = ATCC 33285.
- Beijerinckia derxia* subsp. *venezuelae* Thompson and Skerman 1981, **31**:215, subsp. nov. Type strain: 2 of Materassi = WR-222.
- Beijerinckia indica* subsp. *lacticogenes* Thompson and Skerman 1981, **31**:215, subsp. nov. Type strain: WR-119 = ATCC 19361.
- Beneckea campbellii* Baumann, Baumann, and Mandel 1971 (AL) = *Vibrio campbellii*, **31**:217.
- Beneckea gazogenes* Harwood, Bang, Baumann, and Nealson 1980, **30**:655,* sp. nov., nom. rev. (basonym: “*Beneckea gazogenes*” Harwood 1978). Type strain: PB1 = ATCC 29988 = *Vibrio gazogenes*, **31**:217.
- Beneckea harveyi* (Johnson and Shunk 1936) Reichelt and Baumann 1973 (AL) = *Lucibacterium harveyi* (Johnson and Shunk 1936) Hendrie, Hodgkiss, and Shewan 1970 (AL) = *Vibrio harveyi*, **31**:217.
- Beneckea natriegens* (Payne, Eagon, and Williams 1961) Baumann, Baumann, and Mandel 1971 (AL) = *Vibrio natriegens* **31**:217.
- Beneckea nereida* Harwood, Bang, Baumann, and Nealson 1980, **30**:655,* sp. nov., nom. rev. (basonym: “*Beneckea nereida*” Baumann, Baumann, and Mandel 1971). Type strain: 80 = ATCC 25917 = *Vibrio nereis*, **31**:217.
- Beneckea nigrapulchrituda* Baumann, Baumann, Mandel, and Allen 1971 (AL) = *Vibrio nigrapulchritudo*, **31**:217.
- Beneckea pelagia* Baumann, Baumann, and Mandel 1971 (AL) = *Vibrio pelagius*, **31**:217.
- Beneckea splendida* (Beijerinck 1900) Reichelt, Baumann, and Baumann 1979 (AL) = *Vibrio splendidus*, **31**:217.
- Beneckea vulnifica* Reichelt, Baumann, and Baumann 1979 (AL) = *Vibrio vulnificus* **30**:656.*
- Bifidobacterium coryneforme* Biavati, Scardovi, and Moore 1982, **32**:368,* sp. nov., nom. rev. (basonym: “*Bifidobacterium coryneforme*” Scardovi and Trovatelli 1969). Type strain: ATCC 25911.
- Bifidobacterium gallinarum* Watabe, Benno, and Mitsuoka 1983, **33**:130,* sp. nov. Type strain: Ch206-5 = ATCC 33777.
- Bifidobacterium globosum* Biavati, Scardovi, and Moore 1982, **32**:368,* sp. nov. nom. rev. (basonym: “*Bifidobacterium*

- globosum*" Scardovi, Trovatelli, Crociani, and Sgorbati 1969). Type strain: ATCC 25865.
- Bifidobacterium minimum* Biavati, Scardovi, and Moore 1982, 32:368,* sp. nov. Type strain: ATCC 27538.
- Bifidobacterium subtile* Biavati, Scardovi, and Moore 1982, 32:369,* sp. nov. Type strain: ATCC 27537.
- Bordetella avium* Kersters, Hinz, Hertle, Segers, Lievens, Siegmann, and De Ley 1984, 34:68,* sp. nov. Type strain: Hinz 591-7 = ATCC 35086.
- Borrelia baltazardii* Karimi, Hovind-Hougen, Birch-Andersen, and Asmar 1983, 33:438, sp. nov., nom. rev. (basonym: "*Borrelia baltazardi*" [sic] Karimi, Hovind-Hougen, Birch-Andersen, and Asmar 1979). Type strain: B "x."
- Borrelia burgdorferi* Johnson, Schmid, Hyde, Steigerwalt, and Brenner 1984, 34:496,* sp. nov. Type strain: B31 = ATCC 35210.
- Brachyspira* Hovind-Hougen, Birch-Andersen, Henrik-Nielsen, Orholm, Pedersen, Teglbjaerg, and Thaysen 1983, 33:896, gen. nov. Type species: *B. aalborgi*.
- Brachyspira aalborgi* Hovind-Hougen, Birch-Andersen, Henrik-Nielsen, Orholm, Pedersen, Teglbjaerg, and Thaysen 1983, 33:896, sp. nov. Type strain: 513A = NCTC 11492.
- Bradyrhizobium* Jordan 1982, 32:137,* gen. nov. Type species: *B. japonicum*.
- Bradyrhizobium japonicum* (Kirchner 1896) Jordan 1982, 32:137,* comb. nov. [basonym: *Rhizobacterium japonicum* (AL)]. Type strain: ATCC 10324.
- Branhamella* Catlin 1970 (AL) = *Moraxella* subgenus, 29:404*; also 34:355.
- Branhamella catarrhalis* (Frosch and Kolle 1896) Catlin 1970 (AL) = *Moraxella* (*Branhamella*) *catarrhalis*, 29:404*; also 34:355.
- Brevibacterium casei* Collins, Farrow, Goodfellow, and Minnikin 1983, 33:896, sp. nov. Type strain: NCDO 2048 = ATCC 35513.
- Brevibacterium epidermidis* Collins, Farrow, Goodfellow, and Minnikin 1983, 33:896, sp. nov. Type strain: NCDO 2286.
- Brevibacterium imperiale* (Steinhaus 1941) Breed 1953 (AL) = *Microbacterium imperiale*, 33:672.
- Brevibacterium iodinum* Collins, Jones, Keddle, and Sneath 1981, 31:216, sp. nov. Type strain: NCDO 613.
- Brevibacterium liquefaciens* Okabayashi and Masuo 1960 (AL) does not = *Corynebacterium liquefaciens* 30:544*; see 34:274.*
- Brevibacterium protophormiae* Lysenko 1959 (AL) = *Arthrobacter protophormiae*, 34:270.
- Brevibacterium vitarumen* (Bechdel, Honeywell, Dutscher, and Knutsen 1928) Breed 1957 (AL) = *Corynebacterium vitarumen*, 30:542.*
- Buttiauxella* Ferragut, Izard, Gavini, Lefebvre, and Leclerc 1982, 32:266, gen. nov. Type species: *B. agrestis*.
- Buttiauxella agrestis* Ferragut, Izard, Gavini, Lefebvre, and Leclerc 1982, 32:266, sp. nov. Type strain: Gavini F-44 = CUETM 77-167 = CIP 80-31 = ATCC 33320.
- Caedibacter* Preer, Preer, and Jurand 1982, 32:140,* gen. nov. Type species: *C. taeniospiralis*.
- Caedibacter paraconjugatus* Quackenbush 1982, 32:266, sp. nov. Type strain: 570 = ATCC 30638.
- Caedibacter pseudomutans* Quackenbush 1982, 32:266, sp. nov. Type strain: 51 ml = ATCC 30633.
- Caedibacter taeniospiralis* Preer, Preer, and Jurand 1982, 32:140,* sp. nov., nom. rev. (basonym: "*Caedobacter* [sic] *taeniospiralis*"). Type strain: Preer and Preer 51 = ATCC 30632.
- Caedibacter varicaedens* Quackenbush 1982, 32:266, sp. nov. Type strain: 7 = ATCC 30637.
- Calderobacterium* Kryukov, Savelyeva, and Pusheva 1984, 34:270, gen. nov. Type species: *C. hydrogenophilum*.
- Calderobacterium hydrogenophilum* Kryukov, Savelyeva, and Pusheva 1984, 34:270, sp. nov. Type strain: INMI Z-829.
- Campylobacter concisus* Tanner, Badger, Lai, Listgarten, Visconti, and Socransky 1981, 31:442,* sp. nov. Type strain: FDC 484 = ATCC 33237.
- Campylobacter laridis* Benjamin, Leaper, Owen, and Skirrow 1984, 34:270, sp. nov. Type strain: WRI 3034/77 = NCTC 11352 = ATCC 35221.
- Campylobacter nitrofigilis* McClung, Patriquin, and Davis 1983, 33:610,* sp. nov. Type strain: CI = ATCC 33309.
- Campylobacter sputorum* subsp. *mucosalis* Lawson, Leaver, Pettigrew, and Rowland 1981, 31:390,* subsp. nov., nom. rev. (basonym: "*Campylobacter sputorum* subsp. *mucosalis*" Lawson and Wooding 1974). Type strain: FS253/72 = NCTC 11000.
- Candida cariosilignicola* Lee and Komagata 1980, 30:517,* sp. nov. Type strain: KL 24 = IFO 1910 = IAM 12484 = ATCC 46048.
- Candida milleri* Yarrow 1978, 28:608,* sp. nov. Type strain: CBS 6897 = NRRL Y-7245 = ATCC 56464.
- Candida mucilaginis* Phaff, Starmer, Miranda, and Miller 1980, 30:597,* sp. nov. Type strain: UCD-FS&T 76-236C = CBS 7071 = ATCC 42174.
- Candida paludigena* Golubev, Blagodatskaya, Suetin, and Trotsenko 1981, 31:93,* sp. nov. Type strain: AM-146 = IBPhM Y-917 = ATCC 44801.
- Candida succiphila* Lee and Komagata 1980, 30:518,* sp. nov. Type strain: KL30 = IFO 1911 = IAM 12489 = ATCC 46049.
- Capnocytophaga* Leadbetter, Holt, and Socransky 1982, 32:266, gen. nov. Type species: *C. ochracea*.
- Capnocytophaga gingivalis* Leadbetter, Holt, and Socransky 1982, 32:266, sp. nov. Type strain: 27 = ATCC 33624.
- Capnocytophaga ochracea* (Prevot, Joubert, Tardieux, and de Cadore 1956) Leadbetter, Holt, and Socransky 1982, 32:266, comb. nov. [basonym: *Bacteroides ochraceus* (AL); Leadbetter et. al. strain 25 (ATCC 33596) has 77% DNA homology with the type strain of *Bacteroides ochraceus* (Williams, Hollis, and Holdeman 1979) (J. Clin. Microbiol. 10:550-556) and therefore is an invalid neotype]. Type strain: ATCC 27872.
- Capnocytophaga sputigena* Leadbetter, Holt, and Socransky 1982, 32:266, sp. nov. Type strain: 4 = ATCC 33612.
- Capsularis* Prevot 1938 (AL). (Type species transferred to *Bacteroides*.) 32:271.
- Capsularis zoogeleiformans* (Weinberg, Nativelle, and Prevot 1937) Prevot 1938 (AL) = *Bacteroides zoogeleiformans*, 32:271.*

- Cedecea* Grimont, Grimont, Farmer, and Asbury 1981, 31:324,* gen. nov. Type species: *C. davisae*.
- Cedecea davisae* Grimont, Grimont, Farmer, and Asbury 1981, 31:324,* sp. nov. Type strain: 005 = CDC 3278-77 = CIP 80.34 = ATCC 33431.
- Cedecea lapagei* Grimont, Grimont, Farmer, and Asbury 1981, 31:326,* sp. nov. Type strain: 004 = CDC 0485-76 = CIP 80.35 = ATCC 33432.
- Cedecea neteri* Farmer, Sheth, Hudzinski, Rose, and Asbury 1983, 33:438, sp. nov. Type strain: Grimont et al. strain 002 = CDC 0621-75 = ATCC 33855.
- Cellulomonas cartae* Stackebrandt and Kandler 1980, 30:186,* sp. nov. Type strain: DSM 20106 = ATCC 21681.
- Cellulomonas turbata* (Erikson 1954) Stackebrandt, Seiler, and Schleifer 1983, 33:438, comb. nov. [basonym: *Oerskovia turbata* (AL)]. Type strain: 891 = Orskov strain 27 = NCIB 10587 = ATCC 25835.
- Centipeda* Lai, Males, Dougherty, Berthold, and Listgarten 1983, 33:631,* gen. nov. Type species: *C. periodontii*.
- Centipeda periodontii* Lai, Males, Dougherty, Berthold, and Listgarten 1983, 33:631,* sp. nov. Type strain: LL2383 = ATCC 35019.
- Chitinophaga* Sangkhobol and Skerman 1981, 31:288,* gen. nov. Type species: *C. pinensis*.
- Chitinophaga pinensis* Sangkhobol and Skerman 1981, 31:289,* sp. nov. Type strain: UQM 2034.
- Chromatium purpuratum* Imhoff and Truper 1980, 30:601, sp. nov. Type strain: BN 5500 = DSM 1591.
- Chromobacterium fluviatile* Moss, Ryall, and Logan 1981, 31:216, sp. nov. Type strain: 165 = NCTC 11159 = ATCC 33051.
- Citrobacter amalonaticus* (Young, Kenton, Hobbs, and Moody 1971) Brenner and Farmer 1982, 32:266, comb. nov. [basonym: *Levinea amalonatica* (AL)]. Type strain: NCTC 10805 = ATCC 25405.
- Clavibacter* Davis, Gillaspie, Vidaver, and Harris 1984, 34:113,* gen. nov. Type species: *C. michiganense*.
- Clavibacter iranicum* (Carlson and Vidaver 1982) Davis, Gillaspie, Vidaver, and Harris 1984, 34:113,* comb. nov. (basonym: *Corynebacterium iranicum* 32:322*). Type strain: NCPPB 2253.
- Clavibacter michiganense* subsp. *michiganense* (Smith 1910) Jensen 1934, 34:113,* comb. nov. [basonym: *Corynebacterium michiganense* subsp. *michiganense* (AL), 32:322*]. Type strain: NCPPB 2979.
- Clavibacter michiganense* subsp. *nebraskense* (Vidaver and Mandel 1974) Davis, Gillaspie, Vidaver, and Harris 1984, 34:113,* comb. nov. [basonym: *Corynebacterium michiganense* subsp. *nebraskense*, 32:322*]. Type strain: NCPPB 2581.
- Clavibacter michiganense* subsp. *sepedonicum* (Spieckerman and Kotthoff 1914) Davis, Gillaspie, Vidaver, and Harris 1984, 34:113, comb. nov. [basonym: *Corynebacterium michiganense* subsp. *sepedonicum* (AL), 32:322*]. Type strain: ATCC 33113.
- Clavibacter michiganense* subsp. *tessellarius* (Carlson and Vidaver 1982) Davis, Gillaspie, Vidaver, and Harris 1984, 34:113,* comb. nov. (basonym: *Corynebacterium michiganense* subsp. *tessellarius* Carlson and Vidaver, 32:324*). Type strain: 78181 = PDDCC 7221 = ATCC 33566.
- Clavibacter rathayi* (Smith 1913) Davis, Gillaspie, Vidaver, and Harris 1984, 34:113,* comb. nov. [basonym: *Corynebacterium rathayi* (AL)]. Type strain: NCPPB 2980.
- Clavibacter tritici* (Carlson and Vidaver 1982) Davis, Gillaspie, Vidaver, and Harris 1984, 34:113,* comb. nov. (basonym: *Corynebacterium tritici* 32:324*). Type strain: NCPPB 1857 = ATCC 11403.
- Clavibacter xyli* subsp. *cynodontis* Davis, Gillaspie, Vidaver, and Harris 1984, 34:114,* subsp. nov. Type strain: TB1A = ATCC 33973.
- Clavibacter xyli* subsp. *xyli* Davis, Gillaspie, Vidaver, and Harris 1984, 34:114,* sp. nov., subsp. nov. Type strain: L1A = NCPPB 3152 = PDDCC 7127 = ATCC 33974.
- Clostridium aceticum* Gottschalk and Braun 1981, 31:476,* sp. nov., nom. rev. (basonym: "*Clostridium aceticum*" Wieringa 1940). Type strain: DSM 1496.
- Clostridium cellulolyticum* Petitdemange, Caillet, Giallo, and Gaudin 1984, 34:157,* sp. nov. Type strain: H10 = ATCC 35319.
- Clostridium lentoputrescens* Hartsell and Rettger 1934 (AL) = *Clostridium cochlearium* (AL) by DNA homology. (Nakamura, Okado, Abe, and Nishida 1979. J. Gen. Microbiol. 113:29-35).
- Clostridium lortetii* Oren 1984, 34:270, sp. nov. Type strain: MD-2 = ATCC 35059.
- Clostridium magnum* Schink 1984, 34:355, sp. nov. Type strain: Wo Bd P1 = DSM 2767.
- Clostridium papyrosolvans* Madden, Bryder, and Poole 1982, 32:90,* sp. nov. Type strain: NCIB 11394.
- Clostridium paraperfringens* Nakamura, Tamai, and Nishida 1970 (AL) = *Clostridium barati* (AL), 32:77.*
- Clostridium perenne* (Prevot 1940) McClung and McCoy 1957 (AL) = *Clostridium barati* (AL), 32:77.*
- Clostridium polysaccharolyticum* van Gylswyk, Morris, and Els 1983, 33:438, comb. nov. (basonym: *Fusobacterium polysaccharolyticum* van Gylswyk 31:382). Type strain: B = ATCC 33142.
- Clostridium puniceum* Lund, Brocklehurst, and Wyatt 1981, 31:216, sp. nov. Type strain: BL 70/20 = NCIB 11596.
- Clostridium purinolyticum* Durre, Andersch, and Andreesen 1981, 31:192,* sp. nov. Type strain: WA-1 = DSM 1384 = ATCC 33906.
- Clostridium saccharolyticum* Murray, Khan, and van den Berg 1982, 32:135,* sp. nov. Type strain: WM1 = NRC 2533 = ATCC 35040.
- Clostridium stercoarium* Madden 1983, 33:839,* sp. nov. Type strain: NCIB 11754.
- Clostridium thermoautotrophicum* Wiegel, Braun, and Gottschalk 1982, 32:384, sp. nov. Type strain: JW 701/3 = DSM 1974.
- Clostridium thermosulfurogenes* Schink and Zeikus 1983, 33:896, sp. nov. Type strain: 4B = DSM 2229 = ATCC 33743.
- Conglomeromonas* Skerman, Sly, and Williamson 1983, 33:306,* gen. nov. Type species: *C. largomobilis*.
- Conglomeromonas largomobilis* subsp. *largomobilis* Skerman,

- Sly, and Williamson 1983, 33:307,* sp. nov., subsp. nov. Type strain: UQM 2041.
- Conglomeromonas largomobilis* subsp. *parooensis* Skerman, Sly, and Williamson 1983, 33:307,* subsp. nov. Type strain: UQM 2042.
- Corynebacterium betae* Keyworth, Howell, and Dowson 1956 (AL) = *Corynebacterium flaccumfaciens* subsp. *betae* 32:322.*
- Corynebacterium fascians* (Tilford 1936) Dowson 1942 (AL) = *Rhodococcus fascians*, 34:503.
- Corynebacterium flaccumfaciens* (Hedges 1922) Dowson 1942 (AL) = *Corynebacterium flaccumfaciens* subsp. *flaccumfaciens*, 32:322,* = *Curtobacterium flaccumfaciens*, 34:270.
- Corynebacterium flaccumfaciens* subsp. *betae* (Keyworth, Howell, and Dowson 1956) Carlson and Vidaver 1982, 32:322,* comb. nov. [basonym: *Corynebacterium betae* (AL)]. Type strain: NCPPB 374.
- Corynebacterium flaccumfaciens* subsp. *flaccumfaciens* (Hedges 1922) Dowson 1942, 32:322,* comb. nov. [basonym: *Corynebacterium flaccumfaciens* (AL)] = *Curtobacterium flaccumfaciens*, 34:270. Type strain: NCPPB 1446.
- Corynebacterium flaccumfaciens* subsp. *oortii* (Saaltink and Maas Geesteranus 1969) Carlson and Vidaver 1982, 32:322,* comb. nov. [basonym: *Corynebacterium oortii* (AL)]. Type strain: ATCC 25283.
- Corynebacterium flaccumfaciens* subsp. *poinsettiae* (Starr and Pirone 1942) Carlson and Vidaver 1982, 32:322,* comb. nov. [basonym: *Corynebacterium poinsettiae* (AL)]. Type strain: ATCC 9682.
- Corynebacterium ilicis* Mandel, Guba, and Litsky 1961 (AL) = *Arthrobacter ilicis*, 32:384.
- Corynebacterium insidiosum* (McCulloch 1925) Jensen 1934 (AL) = *Corynebacterium michiganense* subsp. *insidiosum*, 32:322,* = *Clavibacter michiganense* subsp. *insidiosum*, 34:113.*
- Corynebacterium iranikum* Carlson and Vidaver 1982, 32:322,* sp. nov., nom. rev. (basonym: "*Corynebacterium iranikum*" Scharif 1961) = *Clavibacter iranikum* 34:113.* Type strain: NCPPB 2253.
- Corynebacterium liquefaciens* (Okabayashi and Masuo 1960) Laneelle, Asselineau, Welby, Norgard, Imaeda, Pollice, and Barksdale 1980, 30:544,* comb. nov. [basonym: *Brevibacterium liquefaciens* (AL)]. Type strain: ATCC 14929. (Note: *C. liquefaciens* is not valid, 34:274.)
- Corynebacterium matruchotii* (Mendel 1919) Collins 1983, 33:438, comb. nov. [basonym: *Bacterionema matruchotii* (AL)]. Type strain: NCTC 10254 = ATCC 14266.
- Corynebacterium michiganense* (Smith 1910) Jensen 1934 (AL) = *Corynebacterium michiganense* subsp. *michiganense*, 32:322,* = *Clavibacter michiganense* subsp. *michiganense*, 34:113.*
- Corynebacterium michiganense* subsp. *insidiosum* (McCulloch 1925) Carlson and Vidaver 1982, 32:322,* comb. nov. [basonym: *Corynebacterium insidiosum* (AL)] = *Clavibacter michiganense* subsp. *insidiosum*, 34:113. Type strain: NCPPB 1109.
- Corynebacterium michiganense* subsp. *michiganense* (Smith 1910) Jensen 1934 (Rule 46 [sic]), 32:322,* subsp. nov. [basonym: *Corynebacterium michiganense* (AL)] = *Clavibacter michiganense* subsp. *michiganense*, 34:113.* Type strain: NCPPB 2979.
- Corynebacterium michiganense* subsp. *nebraskense* (Vidaver and Mandel 1974) Carlson and Vidaver 1982, 32:322,* comb. nov. [basonym: *Corynebacterium nebraskense* (AL), 34:509*] = *Clavibacter michiganense* subsp. *nebraskense*, 34:113.* Type strain: NCPPB 2581.
- Corynebacterium michiganense* subsp. *sepedonicum* (Spieckermann and Kotthoff 1914) Carlson and Vidaver 1982, 32:322,* comb. nov. [basonym: *Corynebacterium sepedonicum* (AL)] = *Clavibacter michiganense* subsp. *sepedonicum*, 34:113.* Type strain: ATCC 33113.
- Corynebacterium michiganense* subsp. *tessellarius* Carlson and Vidaver 1982, 32:324,* subsp. nov. = *Clavibacter michiganense* subsp. *tessellarius*, 34:113.* Type strain: 78181 = PDDCC 7221 = ATCC 33566.
- Corynebacterium minutissimum* Collins and Jones 1983, 33:870,* sp. nov., nom. rev. (basonym: "*Corynebacterium minutissimum*" Sarkany, Taplin, and Black 1962). Type strain: NCTC 10288.
- Corynebacterium mycetoides* Collins 1983, 33:438, sp. nov., nom. rev. [basonym: "*Corynebacterium mycetoides*" (Castellani 1942) Ortali and Capocacci 1956]. Type strain: NCTC 9864.
- Corynebacterium nebraskense* Vidaver and Mandel 1974 (AL), 34:509* = *Corynebacterium michiganense* subsp. *nebraskense*, 32:322,* = *Clavibacter michiganense* subsp. *nebraskense*, 34:113.*
- Corynebacterium oortii* Saaltink and Maas Geesteranus 1969 (AL) = *Corynebacterium flaccumfaciens* subsp. *oortii*, 32:322.*
- Corynebacterium poinsettiae* (Starr and Pirone 1942) Burkholder 1948 (AL) = *Corynebacterium flaccumfaciens* subsp. *poinsettiae*, 32:322.*
- Corynebacterium pyogenes* (Glage 1903) Ebersson 1918 (AL) = *Actinomyces pyogenes*, 32:427.*
- Corynebacterium rathayi* (Smith 1913) Dowson 1942 (AL) = *Clavibacter rathayi*, 34:113.*
- Corynebacterium sepedonicum* (Spieckermann and Kotthoff 1914) Skaptason and Burkholder 1942 (AL) = *Corynebacterium michiganense* subsp. *sepedonicum*, 32:322,* = *Clavibacter michiganense* subsp. *sepedonicum*, 34:113.*
- Corynebacterium tritici* Carlson and Vidaver 1982, 32:324,* sp. nov., nom. rev. (basonym: "*Corynebacterium tritici*" Hutchinson 1925) = *Clavibacter tritici*, 34:113.* Type strain: NCPPB 1857 = ATCC 11403.
- Corynebacterium vitarumen* (Bechdel, Honeywell, Dutscher, and Knutsen 1928) Laneelle, Asselineau, Welby, Norgard, Imaeda, Pollice, and Barksdale 1980, 30:542,* comb. nov. [basonym: *Brevibacterium vitarumen* (AL)]. Type strain: NCIB 9291 = ATCC 10234.
- Cryptococcus asgardensis* Vishniac and Baharaeen 1982, 32:440,* sp. nov. Type strain: MYSW 302Y310 = ATCC 46399.
- Cryptococcus bacillisporus* Kwon-Chung, Bennett, and Theodore 1978, 28:618,* sp. nov. Type strain: CBS 6955 = ATCC 32608.
- Cryptococcus baldrensis* Vishniac and Baharaeen 1982, 32:441,* sp. nov. Type strain: MYSW 302Y259 = ATCC 46400.

- Cryptococcus hempfingii* Vishniac and Baharaeen 1982, 32:441,* sp. nov. Type strain: MYSW 306Y212 = ATCC 46401.
- Cryptococcus lupi* Baharaeen and Vishniac 1982, 32:230,* sp. nov. Type strain: MYSW 202Y252 = ATCC 44529.
- Cryptococcus tyrolensis* Vishniac and Baharaeen 1982, 32:442,* sp. nov. Type strain: MYSW 303Y336 = ATCC 46405.
- Cryptococcus vishniacii* Vishniac and Hempfling 1979, 29:155,* sp. nov. (emend. auct. Vishniac and Baharaeen 1982, 32:438*) Type strain: MYSW 304Y268 = ATCC 36649.
- Cryptococcus vishniacii* var. *asocialis* Vishniac and Baharaeen 1982, 32:440,* var. nov. Type strain: MYSW 302Y312 = ATCC 46402.
- Cryptococcus vishniacii* var. *vishniacii* Vishniac and Hempfling 1979, 32:438,* var. nov. Type strain: MYSW 304Y268 = ATCC 36649.
- Cryptococcus vishniacii* var. *vladimiri* Vishniac and Baharaeen 1982, 32:440,* var. nov. Type strain: MYSW 302Y265 = ATCC 46403.
- Cryptococcus vishniacii* var. *wolfii* Vishniac and Baharaeen 1982, 32:438,* var. nov. Type strain: MYSW 303Y216 = ATCC 46404.
- Cryptococcus wrightensis* Vishniac and Baharaeen 1982, 32:443,* sp. nov. Type strain: MYSW 303Y206 = ATCC 46406.
- Curtobacterium flaccumfaciens* (Hedges 1922) Collins and Jones 1984, 34:270, comb. nov. [basonym: *Corynebacterium flaccumfaciens* (AL)]. Type strain: NCPPB 1446.
- Curtobacterium saperdae* (Lysenko 1959) Yamada and Komagata 1972 (AL) = *Aureobacterium saperdae*, 33:672.
- Curtobacterium testaceum* (Komagata and Iizuka 1964) Yamada and Komagata 1972 (AL) = *Aureobacterium testaceum*, 33:672.
- Cytophaga arvensicola* Oyaizu, Komagata, Amemura, and Harada 1983, 33:438, sp. nov. Type strain: M64 = IAM 12650.
- Cytophaga heparina* (Payza and Korn 1956) Christensen 1980, 30:473,* comb. nov. [basonym: *Flavobacterium heparinum* (AL)]. Type strain: NCIB 9290 = ATCC 13125.
- Dactylosporangium matsuzakiense* Shomura and Niida 1983, 33:672, sp. nov. Type strain: SF-2052 = FERM-P 4670 = ATCC 31570.
- Dactylosporangium vinaceum* Shomura, Yoshida, Miyadoh, Ito, and Niida 1983, 33:312,* sp. nov. Type strain: SF-2127 = IFO 14181 = ATCC 35207.
- Deinococcaceae* Brooks and Murray 1981, 31:356,* fam. nov. Type genus: *Deinococcus*.
- Deinococcus* Brooks and Murray 1981, 31:354,* gen. nov. Type species: *D. radiodurans*.
- Deinococcus erythromyxa* Brooks and Murray 1981, 31:358,* sp. nov., nom. rev., comb. nov. [basonym: "*Sarcina erythromyxa*" (Zopf 1891) Chester 1901]. Type strain: UWO 1045 = ATCC 187.
- Deinococcus proteolyticus* Brooks and Murray 1981, 31:357,* sp. nov., nom. rev., comb. nov. (basonym: "*Micrococcus radioproteolyticus*" Kobatake, Tamabe, and Hasegawa 1973). Type strain: CCM 2703 = UWO 1056 = ATCC 35074.
- Deinococcus radiodurans* Brooks and Murray 1981, 31:354,* sp. nov., nom. rev., comb. nov. (basonym: "*Micrococcus radiodurans*" Raj, Duryee, Deeney, Wang, Anderson, and Elliker 1960). Type strain: UWO 288 = ATCC 13939.
- Deinococcus radiophilus* Brooks and Murray 1981, 31:357,* sp. nov., nom. rev., comb. nov. (basonym: "*Micrococcus radiophilus*" Lewis 1973). Type strain: UWO 1055 = ATCC 27603.
- Deinococcus radiopugnans* Brooks and Murray 1981, 31:358,* sp. nov. Type strain: UWO 293 = ATCC 19172.
- Deleya* Baumann, Bowditch, and Baumann 1983, 33:800,* gen. nov. Type species: *D. aesta*.
- Deleya aesta* (Baumann, Baumann, Mandel, and Allen 1972) Baumann, Bowditch, and Baumann 1983, 33:801* comb. nov. [basonym: *Alcaligenes aestus* (AL)] Type strain: 134 = ATCC 27128.
- Deleya cupida* (Baumann, Baumann, Mandel, and Allen 1972) Baumann, Bowditch, and Baumann 1983, 33:801* comb. nov. [basonym: *Alcaligenes cupidus* (AL)]. Type strain: 79 = ATCC 27124.
- Deleya halophila* Quesada, Ventosa, Ruiz-Berraquero, and Ramos-Cormenzana 1984, 34:290,* sp. nov. Type strain: F5-7 = CCM 3662.
- Deleya marina* (Cobet, Wirsén, and Jones 1970) Baumann, Bowditch, and Baumann 1983, 33:801,* comb. nov. [basonym: *Pseudomonas marina* (AL)]. Type strain: 219 = ATCC 25374.
- Deleya pacifica* (Baumann, Baumann, Mandel, and Allen 1972) Baumann, Bowditch, and Baumann 1983, 33:801,* comb. nov. [basonym: *Alcaligenes pacificus* (AL)]. Type strain: 62 = ATCC 27122.
- Deleya venusta* (Baumann, Baumann, Mandel, and Allen 1972) Baumann, Bowditch, and Baumann 1983, 33:801,* comb. nov. [basonym: *Alcaligenes venustus* (AL)]. Type strain: 86 = ATCC 27125.
- Desulfobacter* Widdel 1981, 31:382, gen. nov. Type species: *D. postgatei*.
- Desulfobacter postgatei* Widdel 1981, 31:382, sp. nov. Type strain: "Dangast" = 2ac9 = DSM 2034.
- Desulfobulbus* Widdel 1981, 31:382, gen. nov. Type species: *D. propionicus*.
- Desulfobulbus propionicus* Widdel 1981, 31:382, sp. nov. Type strain: "Lindhorst" = 1pr3 = DSM 2032 = ATCC 33891.
- Desulfococcus* Widdel 1981, 31:382, gen. nov. Type species: *D. multivorans*.
- Desulfococcus multivorans* Widdel 1981, 31:382, sp. nov. Type strain: "Göttingen" = 1be1 = DSM 2059 = ATCC 33890.
- Desulfonema* Widdel 1981, 31:382, gen. nov. Type species: *D. limicola*.
- Desulfonema limicola* Widdel 1981, 31:382, sp. nov. Type strain: "Jadebusen" = 5ac10 = DSM 2076.
- Desulfonema magnum* Widdel 1981, 31:382, sp. nov. Type strain: "Montpellier" = 4be13 = DSM 2077.
- Desulfosarcina* Widdel 1981, 31:382, gen. nov. Type species: *D. variabilis*.

- Desulfosarcina variabilis* Widdel 1981, 31:382, sp. nov. Type strain: "Montpellier" = 3be13 = DSM 2060.
- Desulfovibrio baarsii* Widdel 1981, 31:382, sp. nov. Type strain: 2st14 = DSM 2075.
- Desulfovibrio baculatus* Rozanova and Nazina 1984, 34:355, sp. nov. Type strain: INMI strain X.
- Desulfovibrio sapovorans* Widdel 1981, 31:382, sp. nov. Type strain: "Lindhorst" = 1pa3 = DSM 2055 = ATCC 33892.
- Desulfurococcaceae* Zillig and Stetter 1983, 33:438, fam. nov. Type genus: *Desulfurococcus*.
- Desulfurococcus* Zillig and Stetter 1983, 33:438, gen. nov. Type species: *D. mucosus*.
- Desulfurococcus mobilis* Zillig and Stetter 1983, 33:438, sp. nov. Type strain: DSM 2161.
- Desulfurococcus mucosus* Zillig and Stetter 1983, 33:438, sp. nov. Type strain: DSM 2162.
- Ectothiorhodospira abdelmalekii* Imhoff and Truper 1982, 32:266, sp. nov. Type strain: BN 9840 = DSM 2110.
- Ectothiorhodospira vacuolata* Imhoff, Tindall, Grant, and Truper 1982, 32:266, sp. nov. Type strain: BN 9512 = DSM 2111.
- Ectothiorhodospiraceae* Imhoff 1984, 34:338,* fam. nov. Type genus: *Ectothiorhodospira*.
- Edwardsiella hoshinae* Grimont, Grimont, Richard, and Sakazaki 1981, 31:216, sp. nov. Type strain: 2-78 = CIP 78.56 = ATCC 33379.
- Edwardsiella ictaluri* Hawke, McWhorter, Steigerwalt, and Brenner 1981, 31:400,* sp. nov. Type strain: SECFDL GA 77-52 = CDC 1976-78 = ATCC 33202.
- Eeniella* Smith, Batenburg-van der Vegte, and Scheffers 1981, 31:202,* gen. nov. Type species: *E. nana*.
- Eeniella nana* Smith, Batenburg-van der Vegte, and Scheffers 1981, 31:202,* sp. nov., nom. rev., comb. nov. (basonym: "*Brettanomyces nanus*" Scheffers 1966). Type strain: CBS 1945 = ATCC 48014.
- Ehrlichia sennetsu* (Misao and Kobayashi 1956) Ristic and Huxsoll 1984, 34:355, comb. nov. [basonym: *Rickettsia sennetsu* (AL)]. Type strain: ATCC VR 367.
- Ensifer* Casida 1982, 32:343,* gen. nov. Type species: *E. adhaerens*.
- Ensifer adhaerens* Casida 1982, 32:345,* sp. nov. Type strain: A = ATCC 33212.
- Enterobacter amnigenus* Izard, Gavini, Trinel, and Leclerc 1981, 31:37,* sp. nov. Type strain: CUETM 77-118 = ATCC 33072.
- Enterobacter gergoviae* Brenner, Richard, Steigerwalt, Asbury, and Mandel 1980, 30:5,* sp. nov. Type strain: CDC 604-77 = CIP 76.01 = ATCC 33028.
- Enterobacter intermedium* Izard, Gavini, and Leclerc 1980, 30:601, sp. nov. Type strain: E 86 of Gavini = CIP 79-27 = CUETM 77-130 = ATCC 33110.
- Enterobacter sakazakii* Farmer, Asbury, Hickman, and Brenner 1980, 30:575,* sp. nov. Type strain: ATCC 29544.
- Enterobacteraceae* (Lapage 1979) Lapage 1982, 32:237,* fam. nov., nom. rev. (Proposed as a substitute for *Enterobacteriaceae*. Type genus: *Enterobacter*. Request denied by ICSB Judicial Commission, 34:272.*)
- Enterococcus* Schleifer and Kilpper-Balz 1984, 34:32,* gen. nov., nom. rev. (basonym: "*Enterococcus*" Thiercelin and Jouhaud 1903). Type species: *E. faecalis*.
- Enterococcus avium* Collins, Jones, Farrow, Kilpper-Balz, and Schleifer 1984, 34:220,* sp. nov., nom. rev., comb. nov. (basonym: "*Streptococcus avium*" Nowlan and Deibel 1967). Type strain: Guthof E6844 = NCDO 2369 = ATCC 14025.
- Enterococcus casseliflavus* Collins, Jones, Farrow, Kilpper-Balz, and Schleifer 1984, 34:221,* sp. nov., nom. rev., comb. nov. (basonym: "*Streptococcus casseliflavus*" Mundt and Graham 1968). Type strain: MUTK 20 = NCDO 2372 = ATCC 25788.
- Enterococcus durans* Collins, Jones, Farrow, Kilpper-Balz, and Schleifer 1984, 34:222,* sp. nov., nom. rev., comb. nov. (basonym: "*Streptococcus durans*" Sherman and Wing 1937). Type strain: 98D = NCDO 596 = ATCC 19432.
- Enterococcus faecalis* (Andrewes and Horder 1906) Schleifer and Kilpper-Balz 1984, 34:33,* comb. nov. [basonym: *Streptococcus faecalis* (AL)]. Type strain: NCDO 581 = DSM 20478 = NCTC 775 = ATCC 19433.
- Enterococcus faecium* (Orla-Jensen 1919) Schleifer and Kilpper-Balz 1984, 34:33,* comb. nov. [basonym: *Streptococcus faecium* (AL)]. Type strain: NCDO 942 = DSM 20477 = NCTC 7171 = ATCC 19434.
- Enterococcus gallinarum* (Bridge and Sneath 1982) Collins, Jones, Farrow, Kilpper-Balz, and Schleifer 1984, 34:222,* comb. nov. (basonym: *Streptococcus gallinarum* 32:414,*). Type strain: F87/276 = NCDO 2313 = NCTC 11428.
- Enterococcus malodoratus* Collins, Jones, Farrow, Kilpper-Balz, and Schleifer 1984, 34:222,* sp. nov. (basonym: "*Streptococcus faecalis* subsp. *malodoratus*" Pette 1955). Type strain: NCDO 846.
- Erwinia carotovora* subsp. *betavascularum* Thomson, Hildebrand, and Schroth 1984, 34:91, subsp. nov. Type strain: NCPPB 2795.
- Erythrobacter* Shiba and Simidu 1982, 32:215,* gen. nov. Type species: *E. longus*.
- Erythrobacter longus* Shiba and Simidu 1982, 32:216,* sp. nov. Type strain: OCh 101 = IFO 14126 = ATCC 33941.
- Escherichia hermannii* Brenner, Davis, Steigerwalt, Riddle, McWhorter, Allen, Farmer, Saitoh, and Fanning 1983, 33:438, sp. nov. Type strain: CDC 980-72 = ATCC 33650.
- Escherichia vulneris* Brenner, McWhorter, Knutson, and Steigerwalt 1983, 33:438, sp. nov. Type strain: CDC 875-72 = ATCC 33821.
- Escherichiaceae* Goodfellow and Truper 1982, 32:383,* nom. nov. (Name proposed to replace *Enterobacteriaceae* Request for Opinion; Request denied by ICSB Judicial Commission, 34:272*).
- Eubacterium brachy* Holdeman, Cato, Burmeister, and Moore 1980, 30:167,* sp. nov. Type strain: VPI D6B-23 = ATCC 33089.
- Eubacterium limosum* (Type species of *Eubacterium*; Opinion 57) 33:434.*
- Eubacterium nodatum* Holdeman, Cato, Burmeister, and Moore 1980, 30:167,* sp. nov. Type strain: VPI D6A-5 = ATCC 33099.

- Eubacterium plautii* (Seguin 1928) Hofstad and Aasjord 1982, 32:346,* comb. nov. [basonym: *Fusobacterium plauti* (AL)]. Type strain: VPI 0310 = ATCC 29863.
- Eubacterium suis* Wegienek and Reddy 1982, 32:218,* sp. nov., nom. rev., comb. nov. (basonym: “*Corynebacterium suis*” Soltys and Spratling 1957). Type strain: Soltys 50052 = ATCC 33144.
- Eubacterium timidum* Holdeman, Cato, Burmeister, and Moore 1980, 30:164,* sp. nov. Type strain: VPI D1B-22 = ATCC 33093.
- Ewingella* Grimont, Farmer, Grimont, Asbury, Brenner, and Deval 1984, 34:91, gen. nov. Type species: *E. americana*.
- Ewingella americana* Grimont, Farmer, Grimont, Asbury, Brenner, and Deval 1984, 34:91, sp. nov. Type strain: CDC 1468-78 = CIP 8194 = ATCC 33852.
- Exiguobacterium* Collins, Lund, Farrow, and Schleifer 1984, 34:91, gen. nov. Type species: *E. aurantiacum*.
- Exiguobacterium aurantiacum* Collins, Lund, Farrow, and Schleifer 1984, 34:91, sp. nov. Type strain: NCIB 11798.
- Faenia* Kurup and Agre 1983, 33:664,* gen. nov. Type species: *F. rectivirgula*.
- Faenia rectivirgula* (Krassilnikov and Agre 1964) Kurup and Agre 1983, 33:664,* comb. nov. [basonym: *Micropolyspora rectivirgula* (AL)]. Type strain: VKM A810 = INMI 683 = ATCC 33515.
- Falcivibrio* Hammann, Kronibus, Viebahn, and Brandis 1984, 34:355, gen. nov. Type species: *F. grandis*.
- Falcivibrio grandis* Hammann, Kronibus, Viebahn, and Brandis 1984, 34:355, sp. nov. Type strain: L23-1b = DSM 2710.
- Falcivibrio vaginalis* Hammann, Kronibus, Viebahn, and Brandis 1984, 34:355, sp. nov. Type strain: V125 = DSM 2711.
- Flavobacterium breve* Holmes and Owen 1982, 32:233,* sp. nov., nom. rev. [basonym: “*Flavobacterium brevis*” (Lustig 1890) Bergey, Harrison, Breed, Hammer, and Huntoon 1923]. Type strain: NCTC 11099.
- Flavobacterium gleum* Holmes, Owen, Steigerwalt, and Brenner 1984, 34:23,* sp. nov. Type strain: F93 = NCTC 11432.
- Flavobacterium heparinum* Payza and Korn 1956 (AL) = *Cytophaga heparina*, 30:473.*
- Flavobacterium indologenes* Yabuuchi, Kaneko, Yano, Moss, and Miyoshi 1983, 33:596,* sp. nov. Type strain GIFU 1347 = CDC 3716 = NCTC 10796 = ATCC 29897.
- Flavobacterium multivorum* Holmes, Owen, and Weaver 1981, 31:32,* sp. nov. Type strain: B5533 = NCTC 11343 = ATCC 33613 = *Sphingobacterium multivorum*, 33:594.*
- Flavobacterium spiritivorum* Holmes, Owen, and Hollis 1982, 32:159,* sp. nov. Type strain: E7288 = NCTC 11386 = ATCC 33861 = *Sphingobacterium spiritivorum*, 33:594.*
- Flavobacterium thalpophilum* Holmes, Hollis, Steigerwalt, Pickett, and Brenner 1983, 33:679,* sp. nov. Type strain: K-1173 = NCTC 11429.
- Flavobacterium thermophilum* Loginova and Egorova 1982, 32:266, sp. nov. Type strain: BKM 1325.
- Flexibacter canadensis* Christensen 1980, 30:431,* sp. nov. Type strain: UASM 9D = ATCC 29591.
- Fluoribacter* Garrity, Brown, and Vickers 1980, 30:612,* gen. nov. Type species: *F. bozemaniae*.
- Fluoribacter bozemaniae* Garrity Brown, and Vickers 1980, 30:612,* sp. nov. Type strain: WIGA = ATCC 33217.
- Fluoribacter dumoffii* (Brenner, Steigerwalt, Gorman, Weaver, Feeley, Cordes, Wilkinson, Patton, Thomason, and Lewallen-Sasseville 1980) Brown, Garrity, and Vickers 1981, 31:114,* comb. nov. (basonym: *Legionella dumoffii*, 30:676). Type strain: NY-23 = ATCC 33279.
- Fluoribacter gormanii* (Morris, Steigerwalt, Feeley, Wong, Martin, Patton, and Brenner 1980) Brown, Garrity, and Vickers 1981, 31:114,* comb. nov. (basonym: *Legionella gormanii*, 30:676). Type strain: LS-13 = ATCC 33297 (corrig.).
- Francisella tularensis* subsp. *holarctica* Olsufjev and Meshcheryakova 1983, 33:873,* subsp. nov., nom. rev. (basonym: “*Francisella tularensis* subsp. *holarctica*” Olsufjev 1970). Type strain: GIEM 503.
- Francisella tularensis* subsp. *mediasiatica* Olsufjev and Meshcheryakova 1983, 33:874,* subsp. nov., nom. rev. (basonym: “*Francisella tularensis* subsp. *mediasiatica*” Aikimbaev 1966). Type strain: GIEM 543.
- Francisella tularensis* subsp. *tularensis* (McCoy and Chapin 1912) Olsufjev and Meshcheryakova 1983, 33:873,* subsp. nov. [basonym: *Francisella tularensis* (AL)]. Type strain: B-38 = ATCC 6223.
- Frateruria* Swings, Gillis, Kersters, De Vos, Gossele, and De Ley 1980, 30:555,* gen. nov. Type species: *F. aurantia*.
- Frateruria aurantia* Swings, Gillis, Kersters, De Vos, Gossele, and De Ley 1980, 30:555,* sp. nov., nom. rev., comb. nov. (basonym: “*Acetobacter aurantium*” (sic) Kondo and Ameyama 1958). Type strain: IFO 3245 = ATCC 33424.
- Fusobacterium periodonticum* Slots, Potts, and Mashimo 1984, 34:270, sp. nov. Type strain: EK1-15 = ATCC 33693.
- Fusobacterium plauti* Seguin 1928 (AL) = *Eubacterium plautii*, 32:346.*
- Fusobacterium polysaccharolyticum* van Gylswyk 1981, 31:382, sp. nov. Type strain: B = ATCC 33142 = *Clostridium polysaccharolyticum*, 33:438.
- Fusobacterium simiae* Slots and Potts 1982, 32:193,* 33:422,* sp. nov. Type strain: 7511 R2-13 = ATCC 33568.
- Gardnerella* Greenwood and Pickett 1980, 30:176,* gen. nov. Type species: *G. vaginalis*.
- Gardnerella vaginalis* (Gardner and Dukes 1955) Greenwood and Pickett 1980 30:176,* comb. nov. [basonym: *Haemophilus vaginalis* (AL)]. Type strain: 594 of Gardner and Dukes = NCTC 10287 = ATCC 14018.
- Gluconobacter cerinus* Yamada and Akita 1984, 34:503, sp. nov. nom. rev. [basonym: “*Gluconobacter cerinus*” (Asai) Asai and Shoda 1958]. Type strain: IFO 3267 = ATCC 19441.
- Grahamella* Ristic and Kreier 1984, 34:355, gen. nov., nom. rev. (basonym: “*Grahamella*” Brumpt 1911). Type species: *G. talpae*.

- Grahamella peromysci* Ristic and Kreier 1984, **34**:355, sp. nov., nom. rev. (basonym: "*Grahamella peromysci*" Tyzzer 1942). Type strain: No culture isolated.
- Grahamella talpae* Ristic and Kreier 1984, **34**:355, sp. nov., nom. rev. [basonym: "*Grahamella talpae*" (Tartakowsky) Brumpt 1911]. Type strain: No culture isolated.
- Haemobartonella canis* Kreier and Ristic 1984, **34**:355, sp. nov., nom. rev. [basonym: "*Haemobartonella canis*" (Kikuth 1928) Tyzzer and Weininen 1939]. Type strain: No culture isolated.
- Haemobartonella felis* Kreier and Ristic 1984, **34**:355, sp. nov., nom. rev. (basonym: "*Haemobartonella felis*" Flint, Roepke, and Jensen 1958). Type strain: No culture isolated.
- Haemophilus equigenitalis* Taylor, Rosenthal, Brown, Lapage, Hill, and Legros 1983, **33**:439, sp. nov. = *Taylorella equigenitalis*, **34**:503.
- Haemophilus paracuniculus* Targowski and Targowski 1984, **34**:355, sp. nov. Type strain: ATCC 29986.
- Haemophilus pleuropneumoniae* Shope 1964 (AL), **34**:509* = *Actinobacillus pleuropneumoniae*, **33**:513.*
- Haemophilus vaginalis* Gardner and Dukes 1955 (AL) = *Gardnerella vaginalis*, **30**:176.*
- Haloanaerobiaceae* Oren, Paster, and Woese 1984, **34**:503, fam. nov. Type genus: *Haloanaerobium*.
- Haloanaerobium* Zeikus, Hegge, Thompson, Phelps, and Langworthy 1984, **34**:503, gen. nov. Type species: *H. praevalens*.
- Haloanaerobium praevalens* Zeikus, Hegge, Thompson, Phelps, and Langworthy 1984, **34**:503, sp. nov. Type strain: GSL = DSM 2228 = ATCC 33744.
- Halobacterium mediterranei* Rodriguez-Valera, Juez, and Kushner 1983, **33**:896, sp. nov. Type strain: R-4 = CCM 3361 = ATCC 33500.
- Halobacterium pharaonis* Soliman and Truper 1983, **33**:439, sp. nov. Type strain: Gabara = DSM 2160.
- Halobacterium sodomense* Oren 1983, **33**:385,* sp. nov. Type strain: RD-26 = ATCC 33755.
- Halobacteroides* Oren, Weisburg, Kessel, and Woese 1984, **34**:355, gen. nov. Type species: *H. halobius*.
- Halobacteroides halobius* Oren, Weisburg, Kessel, and Woese 1984, **34**:355, sp. nov. Type strain: MD-1 = ATCC 35273.
- Halomonas* Vreeland, Litchfield, Martin, and Elliot 1980, **30**:494,* gen. nov. Type species: *H. elongata*.
- Halomonas elongata* Vreeland, Litchfield, Martin, and Elliot 1980, **30**:495,* sp. nov. Type strain: 1H9 = ATCC 33173.
- Hansenula alni* Phaff, Miller, and Miranda 1979, **29**:60,* sp. nov. Type strain: UCD-FS&T 68-928A = CBS 6986 = ATCC 36594.
- Hansenula populi* Phaff, Yamada, Tredick, and Miranda 1983, **33**:378,* sp. nov. Type strain: UCD-FS&T 68-628C = CBS 8094 = ATCC 48773.
- Holospira* Gromov and Ossipov 1981, **31**:351,* gen. nov., nom. rev., emend. (basonym: "*Holospira*" Hafkine 1890). Type species: *H. undulata*.
- Holospira caryophila* Preer and Preer 1982, **32**:140,* sp. nov., nom. rev., comb. nov. (basonym: "*Cytophaga caryophila*" Preer, Preer, and Jurand 1974). Type strain: in 562 = ATCC 30694.
- Holospira elegans* Preer and Preer 1982, **32**:140,* sp. nov., nom. rev. (basonym: "*Holospira elegans*" Hafkine 1890). Type strain: in C101.
- Holospira obtusa* Gromov and Ossipov 1981, **31**:351,* sp. nov., nom. rev., emend. (basonym: "*Holospira obtusa*" Hafkine 1890). Type strain: in C103 (Preer and Preer, **32**:140*).
- Holospira undulata* Gromov and Ossipov 1981, **31**:351,* sp. nov., nom. rev., emend. (basonym: "*Holospira undulata*" Hafkine 1890). Type strain: in C204 (Preer and Preer, **32**:140*).
- Hydrogenobacter* Kawasumi, Igarashi, Kodama, and Minoda 1984, **34**:9,* gen. nov. Type species: *H. thermophilus*.
- Hydrogenobacter thermophilus* Kawasumi, Igarashi, Kodama, and Minoda 1984, **34**:9,* **34**:370,* sp. nov. Type strain: TK-6 = IAM 12695.
- Hyphomicrobium methylovorum* Izumi, Takizawa, Tani, and Yamada 1983, **33**:439, sp. nov. Type strain: KM 146 = IFO 1480.
- Hyphomicrobium neptunium* Leifson 1964 (AL) = *Hyphomonas neptunium* **34**:73.*
- Hyphomonas* Moore, Weiner, and Gebers 1984, **34**:71,* gen. nov., nom. rev., emend. (basonym: "*Hyphomonas*" Pongratz 1957). Type species: *H. polymorpha*.
- Hyphomonas neptunium* (Leifson 1964) Moore, Weiner, and Gebers 1984, **34**:73,* sp. nov., comb. nov., emend. [basonym: *Hyphomicrobium neptunium* (AL)]. Type strain: LE670 = IFAM LE670 = ATCC 15444.
- Hyphomonas polymorpha* Moore, Weiner, and Gebers 1984, **34**:72,* sp. nov., nom. rev., emend. (basonym: "*Hyphomonas polymorpha*" Pongratz 1957). Type strain: PR728 = IFAM PR 728 = ATCC 33881.
- Issatchenkia occidentalis* Kurtzman, Smiley, and Johnson 1980, **30**:506,* sp. nov. (synonym: *Candida sorbosa*). Type strain: NRRL Y-7552 = CBS 5459.
- Issatchenkia orientalis* (Kudriavzev 1960) Kurtzman, Smiley, and Johnson 1980, **30**:506,* comb. nov. [basonym: *Pichia orientalis* (Kudriavzev 1960) Kreger-van Rij 1964; synonyms: *Pichia kudriavzevii*, *Candida krusei*, *Candida requiyii*]. Type strain: NRRL Y-5396.
- Issatchenkia scutulata* var. *exigua* (Phaff, Miller, and Miranda 1976) Kurtzman, Smiley, and Johnson 1980, **30**:507,* comb. nov. (basonym: *Pichia scutulata* var. *exigua* Phaff et al.) Type strain: NRRL Y-10, 920.
- Issatchenkia scutulata* var. *scutulata* (Phaff, Miller, and Miranda 1976) Kurtzman, Smiley, and Johnson 1980, **30**:507,* comb. nov. (basonym: *Pichia scutulata* var. *scutulata* Phaff et al.). Type strain: NRRL Y-7663.
- Issatchenkia terricola* (van der Walt 1957) Kurtzman, Smiley, and Johnson 1980, **30**:507,* comb. nov. (basonym: *Pichia terricola* van der Walt 1957; synonym: *Saccharomyces terricolus*). Type strain: NRRL YB-4310.
- Kitasatosporia* Omura, Takahashi, Iwai, and Tanaka 1983, **33**:672, gen. nov. Type species: *K. setalba* (corrig., *K. setae*, **35**:221*).

- Kitasatosporia setalba* Omura, Takahashi, Iwai, and Tanaka 1983, **33**:672, sp. nov. Type strain: KM-6054 = ATCC 33774 (corrig., *K. setae*, **35**:221*).
- Klebsiella ozaenae* (Abel 1893) Bergey, Harrison, Breed, Hammer, and Huntoon 1925 (AL) = *Klebsiella pneumoniae* subsp. *ozaenae*, **34**:355.
- Klebsiella planticola* Bagley, Seidler, and Brenner 1982, **32**:266, sp. nov. Type strain: V-236 = CDC 4245-72 = ATCC 33531.
- Klebsiella pneumoniae* (Schroeter 1886) Trevisan 1887 (AL) = *Klebsiella pneumoniae* subsp. *pneumoniae* (Schroeter 1886) Trevisan 1887 (**34**:355, Rule 46.)
- Klebsiella pneumoniae* subsp. *ozaenae* (Abel 1893) Orskov 1984, **34**:355, comb. nov., subsp. nov. [basonym: *Klebsiella ozaenae* (AL)]. Type strain: ATCC 11296.
- Klebsiella pneumoniae* subsp. *rhinoscleromatis* (Trevisan 1887) Orskov 1984, **34**:355, comb. nov., subsp. nov. [basonym: *Klebsiella rhinoscleromatis* (AL)]. Type strain: ATCC 13884.
- Klebsiella rhinoscleromatis* Trevisan 1887 (AL) = *Klebsiella pneumoniae* subsp. *rhinoscleromatis*, **34**:355.
- Klebsiella terrigena* Izard, Ferragut, Gavini, Kersters, De Ley, and Leclerc 1981, **31**:125,* sp. nov. Type strain: Gavini L 84 = CUETM 77-176 = CIP 80-07 = ATCC 33257.
- Klebsiella trevisanii* Ferragut, Izard, Gavini, Kersters, De Ley, and Leclerc 1983, **33**:140,* sp. nov. Type strain: Gavini K70 = CIP 81-36 = CUETM 78-120 = ATCC 33558.
- Kluyvera* Farmer, Fanning, Huntley-Carter, Holmes, Hickman, Richard, and Brenner 1981, **31**:382, gen. nov. Type species: *K. ascorbata*.
- Kluyvera ascorbata* Farmer, Fanning, Huntley-Carter, Holmes, Hickman, Richard, and Brenner 1981, **31**:382, sp. nov. Type strain: CDC 0648-74 = ATCC 33433.
- Kluyvera cryocrescens* Farmer, Fanning, Huntley-Carter, Holmes, Hickman, Richard, and Brenner 1981, **31**:382, sp. nov. Type strain: CDC 2065-78 = ATCC 33435.
- Kurthia gibsonii* Shaw and Keddle 1983, **33**:672, sp. nov. Type strain: NCIB 9758.
- Lactobacillus agilis* Weiss, Schillinger, Laternser, and Kandler 1982, **32**:266, sp. nov. Type strain: DSM 20509.
- Lactobacillus alimentarius* Reuter 1983, **33**:672, sp. nov., nom. rev. (basonym: "*Lactobacillus alimentarius*" Reuter 1970). Type strain: DSM 20249 = ATCC 29643.
- Lactobacillus amylophilus* Nakamura and Crowell 1981, **31**:216, sp. nov. Type strain: NRRL B-4437.
- Lactobacillus amylovorus* Nakamura 1981, **31**:61,* sp. nov. Type strain: NRRL B-4540 = ATCC 33620.
- Lactobacillus animalis* Dent and Williams 1983, **33**:439, sp. nov. Type strain: 1535 = NCDO 2425 = ATCC 35046.
- Lactobacillus bavaricus* Stetter and Stetter 1980, **30**:601, sp. nov. Type strain: DSM 20269 = ATCC 31063.
- Lactobacillus bifermantans* Kandler, Schillinger, and Weiss 1983, **33**:896, sp. nov., nom. rev. (basonym: "*Lactobacillus bifermantans*" Pette and van Beynum 1943). Type strain: DSM 20003.
- Lactobacillus bulgaricus* (Orla-Jensen 1919) Rogosa and Hansen 1971 (AL) = *Lactobacillus delbrueckii* subsp. *bulgaricus*, **34**:270.
- Lactobacillus delbrueckii* subsp. *bulgaricus* (Orla-Jensen 1919) Weiss, Schillinger, and Kandler 1984, **34**:270, comb. nov. [basonym: *Lactobacillus bulgaricus* (AL)]. Type strain: DSM 20081 = ATCC 11842.
- Lactobacillus delbrueckii* subsp. *lactis* (Orla-Jensen 1919) Weiss, Schillinger, and Kandler 1984, **34**:270, comb. nov. [basonym: *Lactobacillus lactis* (AL)]. Type strain: DSM 20072 = ATCC 12315.
- Lactobacillus divergens* Holzapfel and Gerber 1984, **34**:270, sp. nov. Type strain: 66 = DSM 20623.
- Lactobacillus farciminis* Reuter 1983, **33**:672, sp. nov., nom. rev. (basonym: "*Lactobacillus farciminis*" Reuter 1970). Type strain: DSM 20184 = ATCC 29644.
- Lactobacillus gasserii* Lauer and Kandler 1980, **30**:601, sp. nov. Type strain: 63 AM of Gasser = DSM 20243 = ATCC 33323.
- Lactobacillus halotolerans* Kandler, Schillinger, and Weiss 1983, **33**:672, sp. nov., nom. rev., comb. nov. (basonym: "*Lactobacillus viridescens* subsp. *halotolerans*" Reuter 1970). Type strain: R61 = DSM 20190.
- Lactobacillus kandleri* Holzapfel and van Wyk 1983, **33**:439, sp. nov. Type strain: L250 = DSM 20593.
- Lactobacillus kefir* Kandler and Kunath 1983, **33**:672, sp. nov. Type strain: A/K = DSM 20587.
- Lactobacillus lactis* (Orla-Jensen 1919) Bergey, Breed, Hammer, Huntoon, Murray, and Harrison 1934 (AL) = *Lactobacillus delbrueckii* subsp. *lactis*, **34**:270.
- Lactobacillus minor* Kandler, Schillinger, and Weiss 1983, **33**:672, sp. nov., nom. rev., comb. nov. (basonym: "*Lactobacillus viridescens* subsp. *minor*" Abo-Elnaga and Kandler 1965). Type strain: 3 = DSM 20014.
- Lactobacillus murinus* Hemme, Raibaud, Ducluzeau, Galpin, Sicard, and van Heijenoort 1982, **32**:384, sp. nov. Type strain: 313 = CNRZ 220 = ATCC 35020.
- Lactobacillus piscicola* Hiu, Holt, Sriranganathan, Seidler, and Fryer 1984, **34**:399,* sp. nov. Type strain: B270 = ATCC 35586.
- Lactobacillus reuteri* Kandler, Stetter, and Kohl 1982, **32**:266, sp. nov. Type strain: DSM 20016.
- Lactobacillus sanfrancisco* Weiss and Schillinger 1984, **34**:503, sp. nov., nom. rev. (basonym: "*Lactobacillus sanfrancisco*" Kline and Sugihara 1971). Type strain: L-12 = NRRL B-3934 = DSM 20451 = ATCC 27651.
- Lactobacillus sharpeae* Weiss, Schillinger, Laternser, and Kandler 1982, **32**:266, sp. nov. Type strain: DSM 20505.
- Lactobacillus vaccिनosterus* Kozaki and Okada 1983, **33**:439, sp. nov. Type strain: X-94 = TUA 055B = ATCC 33310 (corrig. **33**:673).
- Lactobacillus yamanashiensis* subsp. *mali* (Carr and Davies 1970) Nonomura 1983, **33**:406,* comb. nov. [basonym: *Lactobacillus mali* (AL)]. Type strain: NCIB 10560 = ATCC 27053.
- Lactobacillus yamanashiensis* subsp. *yamanashiensis* Nonomura 1983, **33**:406,* sp. nov., nom. rev., subsp. nov. (basonym: "*Lactobacillus yamanashiensis*" Nonomura, Yamazaki, and Ohara 1965). Type strain: 239 = ATCC 27304 (corrig. **33**:675).
- Legionella bozemanii* Brenner, Steigerwalt, Gorman,

- Weaver, Feeley, Cordes, Wilkinson, Patton, Thomason, and Sasseville 1980, **30**:676, = *Fluoribacter bozemanii*, **30**:612.*
- Legionella dumoffii* Brenner, Steigerwalt, Gorman, Weaver, Feeley, Cordes, Wilkinson, Patton, Thomason, and Sasseville 1980, **30**:676, = *Fluoribacter dumoffii*, **31**:114.*
- Legionella feeleyi* Herwaldt, Gorman, McGrath, Toma, Brake, Hightower, Jones, Reingold, Boxer, Tang, Moss, Wilkinson, Brenner, Steigerwalt, and Broome 1984, **34**:355, sp. nov. Type strain: WO-44C = ATCC 35072.
- Legionella gormanii* Morris, Steigerwalt, Feeley, Wong, Martin, Patton, and Brenner 1980, **30**:676, sp. nov. = *Fluoribacter gormanii*, **31**:114.*
- Legionella jordanis* Cherry, Gorman, Orrison, Moss, Steigerwalt, Wilkinson, Johnson, McKinney, and Brenner 1982, **32**:384, sp. nov. Type strain: BL-540 = ATCC 33623.
- Legionella longbeachae* McKinney, Porschen, Edelstein, Bissett, Harris, Bondell, Steigerwalt, Weaver, Ein, Lindquist, Kops, and Brenner 1982, **32**:266, sp. nov. Type strain: Long Beach 4 = ATCC 33462.
- Legionella micdadei* Hebert, Steigerwalt, and Brenner 1980, **30**:676, = *Tatlockia micdadei*, **30**:612.*
- Legionella oakridgensis* Orrison, Cherry, Tyndall, Fliermans, Gough, Lambert, McDougal, Bibb, and Brenner 1983, **33**:672, sp. nov. Type strain: Oak Ridge 10 = ATCC 33761.
- Legionella pittsburghensis* Pasculle, Feeley, Gibson, Cordes, Myerowitz, Patton, Gorman, Carmack, Ezzell, and Dowling 1980, **30**:676, sp. nov. = *Legionella micdadei*, **30**:612.*
- Legionella saintelensis* Campbell, Bibb, Lambert, Eng, Steigerwalt, Allard, Moss, and Brenner 1984, **34**:355, sp. nov. Type strain: Mt. St. Helens 4 = ATCC 35248.
- Legionella wadsworthii* Edelstein, Brenner, Moss, Steigerwalt, Francis, and George 1983, **33**:672, sp. nov. Type strain: Wadsworth 81-716A = ATCC 33877.
- Leptonema* Hovind-Hougen 1979, **29**:250,* and **33**:439, gen. nov. Type species: *L. illini*.
- Leptonema illini* Hovind-Hougen 1983, **33**:439, sp. nov. Type strain: 3055 = NCTC 11301.
- Leptospira biflexa* (Wolbach and Binger 1914) Noguchi 1918 (AL), Faine and Stallman 1982, **32**:462* (emended description). Type strain: Patoc I = ATCC 23582.
- Leptospira interrogans* (Stimson 1907) Wenyon 1926 (AL), Faine and Stallman 1982, **32**:462,* (emended description). Type strain: RGA = ATCC 23581.
- Leptospira parva* Hovind-Hougen, Ellis, and Birch-Andersen 1982, **32**:384, sp. nov. Type strain: H = NCTC 11395.
- Leuconostoc cremoris* (Knudsen and Sorenson 1929) Garvie 1960 (AL) = *Leuconostoc mesenteroides* subsp. *cremoris*, **33**:118.*
- Leuconostoc dextranicum* (Beijerinck 1912) Hucker and Pederson 1930 (AL) = *Leuconostoc mesenteroides* subsp. *dextranicum*, **33**:118.*
- Leuconostoc mesenteroides* subsp. *cremoris* (Knudsen and Sorenson 1929) Garvie 1983, **33**:118,* comb. nov. [basonym: *Leuconostoc cremoris* (AL)]. Type strain: NCDO 543 = ATCC 19254.
- Leuconostoc mesenteroides* subsp. *dextranicum* (Beijerinck 1912) Garvie 1983, **33**:118,* comb. nov. [basonym: *Leuconostoc dextranicum* (AL)]. Type strain: NCDO 529 = ATCC 19255.
- Leuconostoc mesenteroides* subsp. *mesenteroides* (Tsenkovskii 1878) van Tieghem 1878, **33**:118,* subsp. nov. (Rule 46). Type strain: ATCC 8293.
- Levinea amalonatica* Young, Kenton, Hobbs, and Moody 1971 (AL) = *Citrobacter amalonaticus*, **32**:266.
- Listeria innocua* Seeliger 1983, **33**:439, sp. nov. Type strain: SLCC 3379 = NCTC 11288 = ATCC 33090.
- Listeria ivanovii* Seeliger, Rocourt, Schrettenbrunner, Grimont, and Jones 1984, **34**:336,* sp. nov. Type strain: SLCC 2379 = ATCC 19119.
- Listeria monocytogenes* (Murray, Webb, and Swann 1926) Pirie 1940 (AL). New type strain; request for a Judicial Opinion, **33**:429.* Proposed type strain: NCTC 7973 = ATCC 35152.
- Listeria seeligeri* Rocourt and Grimont 1983, **33**:869,* sp. nov. Type strain: Weis 1120 = SLCC 3954 = CIP 100100.
- Listeria welshimeri* Rocourt and Grimont 1983, **33**:867,* sp. nov. Type strain: Welshimer V8 = SLCC 5334 = CIP 8149.
- Lucibacterium* Hendrie, Hodgkiss, and Shewan 1970 (AL). Type species transferred to *Vibrio* as *Vibrio harveyi*, **31**:217.
- Lucibacterium harveyi* (Johnson and Shunk 1936) Hendrie, Hodgkiss, and Shewan 1970 (AL) and *Beneckea harveyi* (Johnson and Shunk 1936) Reichelt and Baumann 1973 (AL) = *Vibrio harveyi*, **31**:217.
- Lysobacter enzymogenes* subsp. *cookii* Christensen and Cook 1978, **28**:382,* subsp. nov. Type strain: UASM 13B = ATCC 29488.
- Lysobacter enzymogenes* subsp. *enzymogenes* Christensen and Cook 1978, **28**:378,* subsp. nov. Type strain: UASM 495 = ATCC 29487.
- Lyticum* Preer and Preer 1982, **32**:140,* gen. nov., nom. rev. (basonym: "*Lyticum*" Preer, Preer, and Jurand 1974). Type species: *L. flagellatum*.
- Lyticum flagellatum* Preer and Preer 1982, **32**:140,* sp. nov., nom. rev. (basonym: "*Lyticum flagellatum*" Preer, Preer, and Jurand 1974). Type strain: 299 = ATCC 30700.
- Lyticum sinuosum* Preer and Preer 1982, **32**:140,* sp. nov., nom. rev. (basonym: "*Lyticum sinuosum*" Preer, Preer, and Jurand 1974). Type strain: 114 = ATCC 30696.
- Marinomonas* van Landschoot and De Ley 1984, **34**:91, gen. nov. Type species: *M. communis*.
- Marinomonas communis* (Baumann, Baumann, Mandel, and Allen 1972) van Landschoot and De Ley 1984, **34**:91, comb. nov. [basonym: *Alteromonas communis* (AL)]. Type strain: ATCC 27118.
- Marinomonas vaga* (Baumann, Baumann, Mandel, and Allen 1972) van Landschoot and De Ley 1984, **34**:91, comb. nov. [basonym: *Alteromonas vaga* (AL)]. Type strain: ATCC 27119.
- Megamonas* Shah and Collins 1983, **33**:439, gen. nov. Type species: *M. hypermegas*.
- Megamonas hypermegas* (Harrison and Hansen 1963) Shah and Collins 1983, **33**:439, comb. nov. [basonym:

- Bacteroides hypermegas* (AL)]. Type strain: NCTC 10570 = ATCC 25560.
- Melisococcus* Bailey and Collins 1983, 33:672, gen. nov. Type species: *M. pluton*.
- Melisococcus pluton* Bailey and Collins 1983, 33:672, sp. nov., nom. rev., comb. nov. [basonym: “*Streptococcus pluton*” (White 1912) Gubler 1954]. Type strain: NCDO 2443.
- Mendosicutes* Murray 1984, 34:355, division nov. Class “*Archaeobacteria*.”
- Methanobacteriales* Balch and Wolfe 1981, 31:216, ord. nov. Type family: *Methanobacteriaceae*.
- Methanobacterium arborophilicum* (sic) Zeikus and Henning 1975 (AL) = *Methanobrevibacter arboriphilicus*, 31:216.
- Methanobacterium bryantii* Balch and Wolfe 1981, 31:216, sp. nov. Type strain: M.o.H. = DSM 863 = ATCC 33272.
- Methanobacterium mobile* Paynter and Hungate 1968 (AL) = *Methanomicrobium mobile*, 31:216.
- Methanobacterium ruminantium* Smith and Hungate 1958 (AL) = *Methanobrevibacter ruminantium*, 31:216.
- Methanobrevibacter* Balch and Wolfe 1981, 31:216, gen. nov. Type species: *M. ruminantium*.
- Methanobrevibacter arboriphilicus* (Zeikus and Henning 1975) Balch and Wolfe 1981, 31:216, comb. nov., corrig. [basonym: *Methanobacterium arboriphilicum* (AL)]. Type strain: DH1 = DSM 1125 = ATCC 33747.
- Methanobrevibacter ruminantium* (Smith and Hungate 1958) Balch and Wolfe 1981, 31:216, comb. nov. [basonym: *Methanobacterium ruminantium* (AL)]. Type strain: M1 = DSM 1093.
- Methanobrevibacter smithii* Balch and Wolfe 1981, 31:216, sp. nov. Type strain PS = DSM 861 = ATCC 35061.
- Methanococcaceae* Balch and Wolfe 1981, 31:216, fam. nov. Type genus: *Methanococcus*.
- Methanococcales* Balch and Wolfe 1981, 31:216, ord. nov. Type family: *Methanococcaceae*.
- Methanococcus halophilus* Zhilina 1984, 34:270, sp. nov. Type strain: INMI Z-7982.
- Methanococcus jannaschii* Jones, Leigh, Mayer, Woese, and Wolfe 1984, 34:503, sp. nov. Type strain: JAL-1 = DSM 2661.
- Methanococcus maripaludis* Jones, Paynter, and Gupta 1984, 34:270, sp. nov. Type strain: JJ = DSM 2067.
- Methanococcus thermolithotrophicus* Huber, Thomm, and Stetter 1984, 34:270, sp. nov. Type strain: DSM 2095.
- Methanococcus voltae* Balch and Wolfe 1981, 31:216, sp. nov. Type strain: PS = DSM 153 = ATCC 33273.
- Methanogenium* Romesser, Wolfe, Mayer, Spiess, and Walther-Mauruschat 1981, 31:216, gen. nov. Type species: *M. cariaci*.
- Methanogenium cariaci* Romesser, Wolfe, Mayer, Spiess, and Walther-Mauruschat 1981, 31:216, sp. nov. Type strain: JR1 = DSM 1497 = ATCC 35093.
- Methanogenium marisnigri* Romesser, Wolfe, Mayer, Spiess, and Walther-Mauruschat 1981, 31:216, sp. nov. Type strain: JR1 = DSM 1498 = ATCC 35101.
- Methanogenium thermophilicum* Rivard and Smith 1982, 32:435,* sp. nov. Type strain: CR-1 = DSM 2373 = ATCC 33837.
- Methanolobus* König and Stetter 1983, 33:439, gen. nov. Type species: *M. tindarius*.
- Methanolobus tindarius* König and Stetter 1983, 33:439, sp. nov. Type strain: Tindari 3 = DSM 2278.
- Methanomicrobiaceae* Balch and Wolfe 1981, 31:216, fam. nov. Type genus: *Methanomicrobium*.
- Methanomicrobiales* Balch and Wolfe 1981, 31:216, ord. nov. Type family: *Methanomicrobiaceae*.
- Methanomicrobium* Balch and Wolfe 1981, 31:216, gen. nov. Type species: *M. mobile*.
- Methanomicrobium mobile* (Paynter and Hungate 1968) Balch and Wolfe 1981, 31:216, comb. nov. [basonym: *Methanobacterium mobile* (AL)]. Type strain: BP = DSM 1539.
- Methanomicrobium paynteri* Rivard, Henson, Thomas, and Smith 1984, 34:91, sp. nov. Type strain: G-2000 = DSM 2545 = ATCC 33997.
- Methanoplanaceae* Wildgruber, Thomm, and Stetter 1984, 34:270, fam. nov. Type genus: *Methanoplanus*.
- Methanoplanus* Wildgruber, Thomm, and Stetter 1984, 34:270, gen. nov. Type species: *M. limicola*.
- Methanoplanus limicola* Wildgruber, Thomm, and Stetter 1984, 34:270, sp. nov. Type strain: DSM 2279.
- Methanosarcinaceae* Balch and Wolfe 1981, 31:216, fam. nov. Type genus: *Methanosarcina*.
- Methanothermaceae* Stetter, Thomm, Winter, Wildgruber, Huber, Zillig, Jane-Covic, König, Palm, and Wunderl 1982, 32:266, fam. nov. Type genus: *Methanothermus*.
- Methanothermus* Stetter, Thomm, Winter, Wildgruber, Huber, Zillig, Jane-Covic, König, Palm, and Wunderl 1982, 32:267, gen. nov. Type species: *M. fervidus*.
- Methanothermus fervidus* Stetter, Thomm, Winter, Wildgruber, Huber, Zillig, Jane-Covic, König, Palm, and Wunderl 1982, 32:267, sp. nov. Type strain: DSM 2088.
- Methanotherx* Huser, Wuhrmann, and Zehnder 1983, 33: 439, gen. nov. Type species: *M. soehngenii*.
- Methanotherx soehngenii* Huser, Wuhrmann, and Zehnder 1983, 33:439, sp. nov. Type strain: Opfikon = DSM 2139.
- Methylobacterium mesophilicum* (Austin and Goodfellow 1979) Green and Bousfield 1983, 33:876,* comb. nov. [basonym: *Pseudomonas mesophila* (AL)]. Type strain: NCIB 11561 = ATCC 29983.
- Methylobacterium radiotolerans* (Ito and Iizuka 1971) Green and Bousfield 1983, 33:876,* comb. nov. corrig. [basonym: *Pseudomonas radiora* (AL)]. Type strain: NCIB 10815 = ATCC 27329.
- Methylobacterium rhodinum* (Heumann 1962) Green and Bousfield 1983, 33:876,* comb. nov. corrig. [basonym: *Pseudomonas rhodos* (AL)]. Type strain: NCIB 9421 = ATCC 14821.
- Methylococcaceae* Whittenbury and Krieg 1984, 34:355, fam. nov. Type genus: *Methylococcus*.
- Methylococcus bovis* Romanovskaya, Malashenko, and Bogachenko 1981, 31:382, sp. nov. Type strain: CM of Whittenbury.
- Methylococcus chroococcus* Romanovskaya, Malashenko, and Bogachenko 1981, 31:382, sp. nov. Type strain: 9 of Whittenbury.
- Methylococcus luteus* Romanovskaya, Malashenko, and

- Bogachenko 1981, 31:382, sp. nov. Type strain: UCM 53B.
- Methylococcus mobilis* Hazeu, Batenburg-van der Vegte, and de Bruyn 1980, 30:676, sp. nov. Type strain: LMD 77.28.
- Methylococcus vinelandii* Romanovskaya, Malashenko, and Bogachenko 1981, 31:382, sp. nov. Type strain: "Mexico" of Whittenbury.
- Methylococcus whittenburyi* Romanovskaya, Malashenko, and Bogachenko 1981, 31:382, sp. nov. Type strain: 1521 of Whittenbury.
- Methylomonas* Whittenbury and Krieg 1984, 34:355, sp. nov., nom. rev. (basonym: "Methylmonas" Leadbetter 1974). Type species: *M. methanica*.
- Methylomonas methanica* Whittenbury and Krieg 1984, 34:355, sp. nov., nom. rev. [basonym: "Methylomonas methanica" (Sohngen 1906) Leadbetter 1974]. Type strain: NCIB 11130 = ATCC 35067.
- Microbacterium imperiale* (Steinhaus 1941) Collins, Jones, and Kroppenstedt 1983, 33:672, comb. nov. [basonym: *Brevibacterium imperiale* (AL)]. Type strain: NCIB 9888 = ATCC 8365.
- Microbacterium laevaniformans* Collins, Jones, and Kroppenstedt 1983, 33:673, sp. nov., nom. rev., comb. nov. (basonym: "Corynebacterium laevaniformans" Dias and Bhat 1962). Type strain: NCIB 9659 = ATCC 15953.
- Microcycus* Orskov 1928 (AL) = *Ancylobacter*, 33:397,* [Rule 51B(4); fungal *Microcycus* has precedence].
- Microcycus aquaticus* Orskov 1928 (AL) = *Ancylobacter aquaticus*, 33:397,* [Rule 51B(4)].
- Micromonospora olivasterospora* Kawamoto, Yamamoto, and Nara 1983, 33:110,* sp. nov. Type strain: MK70 = ATCC 21819.
- Micropolyspora* Lechevalier, Solotorovsky, and McDurmont 1961 (AL). Type species transferred to *Nocardia* as *N. brevicatena*, 32:384.
- Micropolyspora brevicatena* Lechevalier, Solotorovsky, and McDurmont 1961 (AL) = *Nocardia brevicatena*, 32:384.
- Micropolyspora faeni* Cross, Maciver, and Lacy 1968 (AL) = *Faenia rectivirgula*, 33:664.*
- Micropolyspora rectivirgula* (Krassilnikov and Agre 1964) Prauser and Momirova 1970 (AL) = *Faenia rectivirgula*, 33:664.*
- Mitsuokella* Shah and Collins 1983, 33:439, gen. nov. Type species: *M. multiacidus*.
- Mitsuokella multiacidus* (Mitsuoka, Terada, Watanabe, and Uchida 1974) Shah and Collins 1983, 33:439, comb. nov. [basonym: *Bacteroides multiacidus* (AL)]. Type strain: NCTC 10934 = ATCC 27723.
- Mobiluncus* Spiegel and Roberts 1984, 34:180,* gen. nov. Type species: *Mobiluncus curtisii*.
- Mobiluncus curtisii* subsp. *curtisii* Spiegel and Roberts 1984, 34:181,* sp. nov. Type strain: BV345-16 = ATCC 35241.
- Mobiluncus curtisii* subsp. *holmesii* Spiegel and Roberts 1984, 34:181,* subsp. nov. Type strain: BV376-6 = ATCC 35242.
- Mobiluncus mulieris* Spiegel and Roberts 1984, 34:181,* subsp. nov. Type strain: SV17J = ATCC 35243.
- Moellerella* Hickman-Brenner, Huntley-Carter, Saitoh, Steigerwalt, Farmer, and Brenner 1984, 34:355, gen. nov. Type species: *M. wisconsensis*.
- Moellerella wisconsensis* Hickman-Brenner, Huntley-Carter, Saitoh, Steigerwalt, Farmer, and Brenner 1984, 34:355, sp. nov. Type strain: 2896-78 = ATCC 35017.
- Moraxella* (*Branhamella*) Bove 1979, 29:404,* subgen. nov. [basonym: *Branhamella* (AL)]. Type species: *Moraxella* (*Branhamella*) *catarrhalis*.
- Moraxella atlantae* Bove, Fuglesang, Hagen, Jantzen, and Froholm 1976 (AL) = *Moraxella* (*Moraxella*) *atlantae*, 29:404.*
- Moraxella bovis* (Hauduroy, Urbain, Guillot, and Magrou 1937) Murray 1948 (AL) = *Moraxella* (*Moraxella*) *bovis*, 29:404.*
- Moraxella* (*Branhamella*) *catarrhalis* (Frosch and Kolle 1896) Hendriksen and Bove 1968, 29:404,* comb. nov. [basonyms: *Moraxella catarrhalis* (AL) and *Branhamella catarrhalis* (AL)]. (*Branhamella* = subgenus of *Moraxella*). Type strain: Ne 11 = NCTC 11020 = ATCC 25238.
- Moraxella* (*Branhamella*) *caviae* (Pelczar 1935) Hendriksen and Bove 1968, 29:404,* comb. nov. [basonym: *Moraxella caviae* (AL)]. Type strain: GP 11 = NCTC 10293 = ATCC 14659.
- Moraxella* (*Branhamella*) *ovis* (Lindquist 1960) Hendriksen and Bove 1968, 29:404,* comb. nov. [basonym: *Moraxella ovis* (AL)]. Type strain: 199/55 = NCTC 11227 = ATCC 33078.
- Moraxella catarrhalis* (Frosch and Kolle 1896) Hendriksen and Bove 1968 (AL) = *Moraxella* (*Branhamella*) *catarrhalis*, 29:404.*
- Moraxella caviae* (Pelczar 1953) Hendriksen and Bove 1968 (AL) = *Moraxella* (*Branhamella*) *caviae*, 29:404.*
- Moraxella cuniculi* (Berger 1962) Bove and Hagen 1984, 34:355, comb. nov. [basonym: *Neisseria cuniculi* (AL)]. Type strain: ATCC 14688.
- Moraxella lacunata* (Eyre 1900) Lwoff 1939 (AL) = (*Moraxella*) *lacunata*, 29:404.*
- Moraxella* (*Moraxella*) Lwoff 1939, 29:404 and 34:355,* subgen. nov. (Rule 46). Type species: *Moraxella* (*Moraxella*) *lacunata*.
- Moraxella* (*Moraxella*) *atlantae* Bove, Fuglesang, Hagen, Jantzen, and Froholm 1976, 29:404,* comb. nov. [basonym: *Moraxella atlantae* (AL)]. Type strain: 5118 = NCTC 11091 = ATCC 29525.
- Moraxella* (*Moraxella*) *bovis* (Hauduroy, Ehringer, Urbain, Guillot, and Magrou 1937) Murray 1948, 29:404,* comb. nov. [basonym: *Moraxella bovis* (AL)]. Type strain: ATCC 10900.
- Moraxella* (*Moraxella*) *lacunata* (Eyre 1900) Lwoff 1939, 29:404,* comb. nov. [basonym: *Moraxella lacunata* (AL)]. Type strain: Morax 260 = NCTC 11011 = ATCC 17967.
- Moraxella* (*Moraxella*) *nonliquefaciens* (Scarlett 1916) Lwoff 1939, 29:404,* comb. nov. [basonym: *Moraxella nonliquefaciens* (AL)]. Type strain: 4663/62 = NCTC 10464 = ATCC 19975.
- Moraxella* (*Moraxella*) *osloensis* Bove and Hendriksen 1967, 29:404,* comb. nov. [basonym: *Moraxella osloensis* (AL)]. Type strain A1920 = NCTC 10465 = ATCC 19976.

- Moraxella (Moraxella) phenylpyruvica* Bovre and Hendriksen 1967, 29:404,* comb. nov. [basonym: *Moraxella phenylpyruvica* (AL)]. Type strain: 2863 = NCTC 10526 ATCC 23333.
- Moraxella nonliquefaciens* (Scarlett 1916) Lwoff 1936 (AL) = *Moraxella (Moraxella) nonliquefaciens*, 29:404.*
- Moraxella osloensis* Bovre and Hendriksen 1967 (AL) = *Moraxella (Moraxella) osloensis*, 29:404.*
- Moraxella ovis* (Lindquist 1960) Hendriksen and Bovre 1968 (AL) = *Moraxella (Branhamella) ovis*, 29:404.*
- Moraxella phenylpyruvica* Bovre and Hendricksen 1967 (AL) = *Moraxella (Moraxella) phenylpyruvica*, 29:404.*
- Morococcus* Long, Sly, Pham, and Davis 1981, 31:299,* gen. nov. Type species: *M. cerebrosus*.
- Morococcus cerebrosus* Long, Sly, Pham, and Davis 1981, 31:299,* sp. nov. Type strain: UQM 858 = NCTC 11393 = ATCC 33486.
- Mycobacterium agri* Tsukamura 1981, 31:256,* sp. nov., nom. rev. (basonym: “*Mycobacterium agri*” Tsukamura 1972). Type strain: 90012 = ATCC 27406.
- Mycobacterium aichiense* Tsukamura, Mizuno, and Tsukamura 1981, 31:274,* sp. nov., nom. rev. (basonym: “*Mycobacterium aichiense*” Tsukamura 1973). Type strain: 49005 = NCTC 10820 = ATCC 27280.
- Mycobacterium aquae* Jenkins, Marks, and Schaefer 1972 = nomen rejiciendum, Opinion 55, 32:467.*
- Mycobacterium austroafricanum* Tsukamura, van der Meulen, and Grabow 1983, 33:467,* sp. nov. Type strain: E9789-SA12441 = ATCC 33464.
- Mycobacterium chubuense* Tsukamura, Mizuno, and Tsukamura 1981, 31:274,* sp. nov., nom. rev. (basonym: “*Mycobacterium chubuense*” Tsukamura 1973). Type strain: 48013 = NCTC 10819 = ATCC 27278.
- Mycobacterium diernhoferi* Tsukamura, van der Meulen, and Grabow 1983, 33:468,* sp. nov., nom. rev. (basonym: “*Mycobacterium diernhoferi*” Bonicke and Juhasz 1965). Type strain: 41001 = ATCC 19340.
- Mycobacterium fallax* Levy-Frebault, Rafidinarivo, Prome, Grandry, Boisvert, and David 1983, 33:342,* sp. nov. Type strain: CIP 8139.
- Mycobacterium obuense* Tsukamura, Mizuno, and Tsukamura 1981, 31:274,* sp. nov., nom. rev. (basonym: “*Mycobacterium obuense*” Tsukamura and Mizuno 1971). Type strain: 47001 = NCTC 10778 = ATCC 27023.
- Mycobacterium porcinum* Tsukamura, Nemoto, and Yugi 1983, 33:164,* sp. nov. Type strain: E10241-1 = ATCC 33776.
- Mycobacterium pulveris* Tsukamura, Mizuno, and Toyama 1983, 33:811,* sp. nov. Type strain: NCH 33505 = ATCC 35154.
- Mycobacterium rhodesiae* Tsukamura, Mizuno, and Tsukamura 1981, 31:274,* sp. nov., nom. rev. (basonym: “*Mycobacterium rhodesiae*” Tsukamura, Mizuno, Gane, Mills, and King, 1971). Type strain: 02002 = NCTC 10779 = ATCC 27024.
- Mycobacterium shimoidei* Tsukamura 1982, 32:67,* 32:469,* sp. nov., nom. rev. (basonym: “*Mycobacterium shimoidei*” Tsukamura, Shimoide, and Schaefer 1975). Type strain: E4796 = ATCC 27962.
- Mycobacterium sphagni* Kazda 1980, 30:81,* sp. nov. Type strain: Sph 38 = ATCC 33027.
- Mycobacterium tokaiense* Tsukamura, Mizuno, and Tsukamura 1981, 31:274,* sp. nov., nom. rev. (basonym: “*Mycobacterium tokaiense*” Tsukamura 1973). Type strain: 47503 = NCTC 10821 = ATCC 27282.
- Mycoplasma californicum* Jasper, Erno, Dellinger, and Christiansen 1981, 31:344,* sp. nov. Type strain: ST-6 = AMRC-C 1077 = ATCC 33461.
- Mycoplasma cloacale* Bradbury and Forrest 1984, 34:391,* sp. nov. Type strain: 383 = NCTC 10199 = ATCC 35276.
- Mycoplasma collis* Hill 1983, 33:850,* sp. nov. Type strain: 58B = NCTC 10197.
- Mycoplasma columbinasale* Jordan, Erno, Cottew, Hinz, and Stipkovits 1982, 32:114,* sp. nov. Type strain: 694 = NCTC 10184 = ATCC 33549.
- Mycoplasma cricetuli* Hill 1983, 33:117,* sp. nov. Type strain: CH = NCTC 10190.
- Mycoplasma fastidiosum* Lemcke and Poland 1980, 30:161,* sp. nov. Type strain: 4822 = NCTC 10180 = ATCC 33229.
- Mycoplasma gallinaceum* Jordan, Erno, Cottew, Hinz, and Stipkovits 1982, 32:114,* sp. nov. Type strain: DD = NCTC 10183 = ATCC 33550.
- Mycoplasma gallopavonis* Jordan, Erno, Cottew, Hinz, and Stipkovits 1982, 32:114,* sp. nov. Type strain: WRI = NCTC 10186 = ATCC 33551.
- Mycoplasma genitalium* Tully, Taylor-Robinson, Rose, Cole, and Bove 1983, 33:395,* sp. nov. Type strain: G-37 = ATCC 33530.
- Mycoplasma glycyphilum* Forrest and Bradbury 1984, 34:355,* sp. nov. Type strain: 486 = NCTC 10194 = ATCC 35277.
- Mycoplasma iowae* Jordan, Erno, Cottew, Hinz, and Stipkovits 1982, 32:114,* sp. nov. Type strain: 695 = NCTC 10185 = ATCC 33552.
- Mycoplasma lipofaciens* Bradbury, Forrest, and Williams 1983, 33:334,* sp. nov. Type strain: R171 = NCTC 10191 = ATCC 35015.
- Mycoplasma muris* McGarrity, Rose, Kwiatkowski, Dion, Phillips, and Tully 1983, 33:355,* sp. nov. Type strain: RIII-4 = ATCC 33757.
- Mycoplasma mustelae* Salih, Friis, Arseculeratne, Freundt, and Christiansen 1983, 33:478,* sp. nov. Type strain: MX9 = AMRC-C 1486 = NCTC 10193 = ATCC 35214.
- Mycoplasma pullorum* Jordan, Erno, Cottew, Hinz, and Stipkovits 1982, 32:114,* sp. nov. Type strain: CKK = NCTC 10187 = ATCC 33553.
- Mycoplasma synoviae* Jordan, Erno, Cottew, Hinz, and Stipkovits 1982, 32:114,* sp. nov. Type strain: WVU 1853 = NCTC 10124 = ATCC 25204.
- Myxococcus disciformis* Thaxter 1892 (AL) = *Angiococcus disciformis*, 30:142.*
- Natronobacterium* Tindall, Ross, and Grant 1984, 34:355, gen. nov. Type species: *N. gregoryi*.
- Natronobacterium gregoryi* Tindall, Ross, and Grant 1984, 34:355, sp. nov. Type strain: SP2 = NCMB 2189.
- Natronobacterium magadii* Tindall, Ross, and Grant 1984, 34:355, sp. nov. Type strain: MS3 = NCMB 2190.

- Natronococcus* Tindall, Ross, and Grant 1984, **34**:355, gen. nov. Type species: *N. occultus*.
- Natronococcus occultus* Tindall, Ross, and Grant 1984, **34**:355, sp. nov. Type strain: SP4 = NCMB 2192.
- Neisseria cuniculi* Berger 1962 (AL) = *Moraxella cuniculi*, **34**:355.
- Neisseria macacae* Vedros, Hoke, and Chun 1983, **33**:519,* sp. nov. Type strain: M-740 = ATCC 33926.
- Nocardia brevicatena* (Lechevalier, Solotorovsky, and McDermont 1961) Goodfellow and Pirouz 1982, **32**:384, comb. nov. [basonym: *Micropolyspora brevicatena* (AL)]. Type strain: IMRU 1086W = ATCC 15333.
- Nocardia farcinica* Trevisan 1889 (AL). (Request for rejection of the name [32:235*]. Request denied by ICSB Judicial Commission, **34**:272.*)
- Nocardia nova* Tsukamura 1983, **33**:896, sp. nov. Type strain: Tsukamura 23095 = R. E. Gordon R443 = ATCC 33726.
- Nocardia otitidiscaviarum* Snijders 1924, (AL) (corrig.) **33**:425,* [basonym: *Nocardia otitidis-caviarum* (AL)].
- Nocardioides simplex* (Jensen 1934) O'Donnell, Goodfellow, and Minnikin 1983, **33**:896, comb. nov. [basonym: *Arthrobacter simplex* (AL)]. Type strain: ATCC 6946.
- Nocardiopsis antarcticus* Abyzov, Philippova, and Kuznetsov 1984, **34**:91, sp. nov. Type strain: 25-145 = VKM A-836.
- Nocardiopsis dassonvillei* subsp. *prasina* Miyashita, Mikami, and Arai 1984, **34**:408,* subsp. nov. Type strain: 208 = JCM 3336.
- Nocardiopsis mutabilis* Shearer, Colman, and Nash 1983, **33**:374,* sp. nov. Type strain: SK&F-AAA025 = ATCC 31520.
- Oceanospirillum commune* (Baumann, Baumann, Mandel, and Allen 1972) Bowditch, Baumann, and Baumann 1984, **34**:503, comb. nov. [basonym: *Alteromonas communis* (AL)]. Type strain: 8 = ATCC 27118.
- Oceanospirillum jannaschii* Bowditch, Baumann, and Baumann 1984, **34**:503, sp. nov. Type strain: 207 = ATCC 27135.
- Oceanospirillum kriegii* Bowditch, Baumann, and Baumann 1984, **34**:503, sp. nov. Type strain: 197 = ATCC 27133.
- Oceanospirillum maris* subsp. *williamsae* Linn and Krieg 1978, **28**:137 and **34**:355, subsp. nov. Type strain: ATCC 29547.
- Oceanospirillum vagum* (Baumann, Baumann, Mandel, and Allen 1972) Bowditch, Baumann, and Baumann 1984, **34**:503, comb. nov. [basonym: *Alteromonas vaga* (AL)]. Type strain: 40 = ATCC 27119.
- Oerskovia* Prauser, Lechevalier, and Lechevalier 1970 (AL) (type species transferred to *Cellulomonas*), **33**:438.
- Oerskovia turbata* (Erikson 1954) Prauser, Lechevalier, and Lechevalier 1970 (AL) = *Cellulomonas turbata*, **33**:438.
- Pasteurellaceae* Pohl 1981, **31**:382, fam. nov. Type genus: *Pasteurella*.
- Pasteurella testudinis* Snipes and Biberstein 1982, **32**:209,* sp. nov. Type strain: UCD 90-23-79n = ATCC 33688.
- Pelobacter* Schink and Pfennig 1983, **33**:896, gen. nov. Type species: *P. acidigallici*.
- Pelobacter acidigallici* Schink and Pfennig 1983, **33**:896, sp. nov. Type strain: Ma Gal 2 = DSM 2377.
- Pelobacter carbinolicus* Schink 1984, **34**:356, sp. nov. Type strain: Gra Bd 1 = DSM 2380.
- Pelobacter propionicus* Schink 1984, **34**:356, sp. nov. Type strain: Ott Bd 1 = DSM 2379.
- Pelobacter venetianus* Schink and Stieb 1984, **34**:91, sp. nov. Type strain: Gra PEG 1 = DSM 2394.
- Peptococcus asaccharolyticus* (Distaso 1912) Douglas 1957 (AL) = *Peptostreptococcus asaccharolyticus*, **33**:690.*
- Peptococcus glycinophilus* (Cardon and Barker 1946) Douglas 1957 (AL) = *Peptostreptococcus micros*, **33**:207.*
- Peptococcus heliotrinreducens* (corrig.) Lanigan 1983, **33**:673, sp. nov. (basonym: *Peptococcus heliotrinreducans* [sic] Lanigan 1976; *Peptococcus heliotrinreducens* [sic] 1983, **33**:673). Type strain RHS1 = NCTC 11029 = ATCC 29202.
- Peptococcus indolicus* (Christiansen 1934) Sorensen 1975 (AL) = *Peptostreptococcus indolicus*, **33**:692.*
- Peptococcus magnus* (Prevot 1933) Holdeman and Moore 1972 (AL) = *Peptostreptococcus magnus*, **33**:696.*
- Peptococcus prevotii* (Foubert and Douglas 1984) Douglas 1957 (AL) = *Peptostreptococcus prevotii*, **33**:693.*
- Peptococcus saccharolyticus* (Foubert and Douglas 1948) Douglas 1957 (AL) = *Staphylococcus saccharolyticus*, **34**:91.
- Peptostreptococcus asaccharolyticus* (Distaso 1912) Ezaki, Yamamoto, Ninomiya, Suzuki, and Yabuuchi 1983, **33**:690,* comb. nov. [basonym: *Peptococcus asaccharolyticus* (AL)]. Type strain: ATCC 14963.
- Peptostreptococcus indolicus* (Christiansen 1934) Ezaki, Yamamoto, Ninomiya, Suzuki, and Yabuuchi 1983, **33**:692,* comb. nov. [basonym: *Peptococcus indolicus* (AL)]. Type strain: ATCC 29427.
- Peptostreptococcus magnus* (Prevot 1933) Ezaki, Yamamoto, Ninomiya, Suzuki, and Yabuuchi 1983, **33**:696,* comb. nov. [basonym: *Peptococcus magnus* (AL)]. Type strain: ATCC 15794.
- Peptostreptococcus micros* (Prevot 1933) Smith 1957 (AL). Type strain: VPI 5464 = ATCC 33270.
- Peptostreptococcus parvulus* (Weinberg, Nativelle, and Prevot 1937) Smith 1957 (AL) = *Streptococcus parvulus*, **33**:83.*
- Peptostreptococcus prevotii* (Foubert and Douglas 1948) Ezaki, Yamamoto, Ninomiya, Suzuki, and Yabuuchi 1983, **33**:693,* comb. nov. [basonym: *Peptococcus prevotii* (AL)]. Type strain: ATCC 9321.
- Peptostreptococcus tetradius* Ezaki, Yamamoto, Ninomiya, Suzuki, and Yabuuchi 1983, **33**:696,* sp. nov. (synonym: "*Gaffkya anaerobia*"). Type strain: GIFU 7672 = JCM 1964 = CCM 3634 = ATCC 35098.
- Photobacterium logei* Harwood, Bang, Baumann, and Nealson 1980, **30**:655,* sp. nov., non. rev. (basonym: "*Photobacterium logei*" Bang, Baumann, and Nealson 1978). Type strain: 584 = ATCC 29985 = *Vibrio logei*, **31**:217.
- Phyllobacterium* Knosel 1984, **34**:356, gen. nov., nom. rev. (basonym: "*Phyllobacterium*" Knosel 1962). Type species: *P. myrsinacearum*.
- Phyllobacterium myrsinacearum* Knosel 1984, **34**:356, sp.

- nov., nom. rev. (basonym: "*Phyllobacterium mysinacearum*" [sic] Knosel 1962). Type strain: LMG 212.
- Phyllobacterium rubiacearum* Knosel 1984, 34:356, sp. nov., nom. rev. [basonym: "*Phyllobacterium rubiacearum*" (von Faber) Knosel 1962]. Type strain: LMG 1t1.
- Pichia amethionina* var. *amethionina* Starmer, Phaff, Miranda, and Miller 1978, 28:435,* sp. nov., subsp. nov. Type strain: UCD-FST 76-401B = CBS 6940 = ATCC 36080.
- Pichia amethionina* var. *pachycereana* Starmer, Phaff, Miranda, and Miller 1978, 28:437,* subsp. nov. Type strain: UCD-FST 76-384A = CBS 6943 = ATCC 36079.
- Pichia amylophila* Kurtzman, Smiley, Johnson, Wickerham, and Fuson 1980, 30:209,* sp. nov. Type strain: NRRL YB-1287 = CBS 7020 = ATCC 44363.
- Pichia antillensis* Starmer, Phaff, Tredick, Miranda, and Aberdeen 1984, 34:350,* sp. nov. Type strain: UCD-FST 82-651A = CBS 7111 = ATCC 56267.
- Pichia cactophila* Starmer, Phaff, Miranda, and Miller 1978, 28:319,* sp. nov. Type strain: UCD-FST 76-243A = CBS 6926 = ATCC 34932.
- Pichia cellobiosa* Lee and Komagata 1980, 30:515,* sp. nov. Type strain: KL 1 = IFO 1909 = IAM 12481 = ATCC 46071.
- Pichia heedii* Phaff, Starmer, Miranda, and Miller 1978, 28:327,* sp. nov. Type strain UCD-FST 76-356 = CBS 6930 = ATCC 34936.
- Pichia inositovora* Golubev, Blagodatskaya, Suetin, and Trotsenko 1981, 31:91,* sp. nov. Type strain: AM-125 = IBPhM Y-888 = ATCC 44802.
- Pichia kudriavzevii* (Kudriavzev) Boidin, Pignal, and Besson 1965 = *Issatchenkia orientalis*, 30:506.*
- Pichia mexicana* Miranda, Holzschu, Phaff, and Starmer 1982, 32:103,* sp. nov. Type strain: UCD-FST 76-308A = CBS 7066 = ATCC 42175.
- Pichia mississippiensis* Kurtzman, Smiley, Johnson, Wickerham, and Fuson 1980, 30:212,* sp. nov. Type strain: NRRL YB-1294 = CBS 7023 = ATCC 44359.
- Pichia opuntiae* var. *opuntiae* Starmer, Phaff, Miranda, Miller, and Barker 1979, 29:160,* subsp. nov. Type strain: UCD-FST 77-40 = CBS 7010 = ATCC 36836.
- Pichia opuntiae* var. *thermotolerans* Starmer, Phaff, Miranda, Miller, and Barker 1979, 29:160,* subsp. nov. Type strain: UCD-FST 76-211 = CBS 7012 = ATCC 36834.
- Pichia orientalis* (Kudriavzev) Kreger-van Rij 1964 = *Issatchenkia orientalis*, 30:506.*
- Pichia scutulata* Phaff, Miller, and Miranda 1976 = *Issatchenkia scutulata*, 30:507.*
- Pichia terricola* van der Walt 1957 = *Issatchenkia terricola*, 30:507.*
- Pimelobacter* Suzuki and Komagata 1983, 33:673, gen. nov. Type species: *P. simplex*.
- Pimelobacter jensenii* Suzuki and Komagata 1983, 33:673, sp. nov. Type strain: CNF 091 = JCM 1364 = IAM 12581 = NCIB 9770.
- Pimelobacter simplex* (Jensen 1934) Suzuki and Komagata 1983, 33:673, comb. nov. [basonym: *Arthrobacter simplex* (AL)]. Type strain: AJ 1420 = JCM 1363 = IAM 1660 = ATCC 6946.
- Pimelobacter tumescens* (Jensen 1934) Suzuki and Komagata 1983, 33:673, comb. nov. [basonym: *Arthrobacter tumescens* (AL)]. Type strain: JCM 1365 = IAM 12345 = ATCC 6947.
- Pirella* Schlesner and Hirsch 1984, 34:494,* gen. nov. Type species: *P. staleyii*.
- Pirella staleyii* Schlesner and Hirsch 1984, 34:494,* sp. nov. Type strain: ATCC 27377.
- Planctomyces guttaeformis* Starr and Schmidt 1984, 34:473,* sp. nov., nom. rev. (basonym: "*Planctomyces guttaeformis*" Hortobagyi 1965). Type strain: No culture isolated.
- Planctomyces maris* Bauld and Staley 1980, 30:657,* sp. nov., nom. rev. (basonym: "*Planctomyces maris*" Bauld and Staley 1976). Type strain: 534-30 = ATCC 29201.
- Planctomyces stranskae* Starr and Schmidt 1984, 34:473,* sp. nov., nom. rev. (basonym: "*Planctomyces stranskae*" Wawrik 1952). Type strain: No culture isolated.
- Promicromonospora enterophila* Jager, Marialigeti, Hauck, and Barabas 1983, 33:530,* sp. nov. Type strain: DFA-19 = HMGB B1078.
- Propionibacterium acidipropionici* (Orla-Jensen 1909) corrig. Farmer 1983, 33:425* [basonym: *Propionibacterium acidipropionici* (AL)]. Type strain: ATCC 25562.
- Propionigenium* Schink and Pfennig 1983, 33:896, gen. nov. Type species: *P. modestum*.
- Propionigenium modestum* Schink and Pfennig 1983, 33:896, sp. nov. Type strain: Gra Succ 2 = DSM 2376.
- Propionispira* Schink, Thompson, and Zeikus 1983, 33:673, gen. nov. Type species: *P. arboris*.
- Propionispira arboris* Schink, Thompson, and Zeikus 1983, 33:673, sp. nov. Type strain: 12B4 = ATCC 33732.
- Prostheobacter* Staley, de Bont, and de Jonge 1980, 30:595,* gen. nov., nom. rev. (basonym: "*Prostheobacter*" Staley, de Bont, and de Jonge 1976). Type species: *P. fusiformis*.
- Prostheobacter fusiformis* Staley, de Bont, and de Jonge 1980, 30:595,* sp. nov., nom. rev. (basonym: "*Prostheobacter fusiformis*" Staley, de Bont, and de Jonge 1976). Type strain: FC4 = ATCC 25309.
- Prosthecomicrobium* Staley 1968 (AL) (emendation of description). 34:307.* Type species: *P. pneumaticum*.
- Prosthecomicrobium hirschi* Staley 1984, 34:307,* sp. nov. Type strain: 16 = ATCC 27832.
- Prosthecomicrobium litoralum* Bauld, Bigford, and Staley 1983, 33:616,* sp. nov. Type strain: 524-16 = ATCC 35022.
- Proteus penneri* Hickman, Steigerwalt, Farmer, and Brenner 1983, 33:440 and 673, sp. nov. Type strain: CDC 1808-73 = ATCC 33519.
- Protomonas* Urakami and Komagata 1984, 34:198,* gen. nov. Type species: *P. extorquens*.
- Protomonas extorquens* Urakami and Komagata 1984, 34:198,* sp. nov., comb. nov., nom. rev. (basonym: "*Bacillus extorquens*" Bassalik 1913). Type strain: TK 0001 = DSM 1337 = NCIB 9399.
- Providencia friederici* Muller 1983, 33:714,* sp. nov. Type strain: 1/33 = DSM 2620.
- Providencia rustigianii* Hickman-Brenner, Farmer, Steiger-

- walt, and Brenner 1983, 33:673, sp. nov. Type strain: CDC 10132-68 = ATCC 33673.
- Pseudocaedibacter* Quackenbush 1982, 32:267, gen. nov. Type species: *P. conjugatus*.
- Pseudocaedibacter conjugatus* Quackenbush 1982, 32:267, sp. nov. Type strain: 540 = ATCC 30796.
- Pseudocaedibacter falsus* Quackenbush 1982, 32:267, sp. nov. Type strain: 1010 = ATCC 30640.
- Pseudocaedibacter minutus* Quackenbush 1982, 32:267, sp. nov. Type strain: 214 = ATCC 30699.
- Pseudomonas carboxydohydrogena* Meyer, Lalucat, and Schlegel 1980, 30:194,* sp. nov., nom. rev., comb. nov. (basonym: "*Seliberia carboxydohydrogena*" Sanjiva and Zavarzin 1971). Type strain: Z-1062 = DSM 1083 = ATCC 29978.
- Pseudomonas cepacia* Palleroni and Holmes 1981, 31:479,* sp. nov., nom. rev. (basonym: "*Pseudomonas cepacia*" Burkholder 1950). Type strain: Burkholder = 717-ICPB 25 = NCTC 107433 = ATCC 25416.
- Pseudomonas coronafaciens* Schaad and Cunfer 1979, 29:219,* sp. nov., nom. rev. [basonym: "*Pseudomonas coronafaciens* (Elliott 1920) Stevens 1925; synonyms: "*Pseudomonas coronafaciens* pathovar. *zeae*" Ribeiro, Durbin, Army, and Uchytel 1977, "*Pseudomonas coronafaciens* subsp. *atropurpurea*" (Reddy and Godkin 1923) Stapp 1928, "*Pseudomonas striafaciens*" (Elliott 1927) Starr and Burkholder 1942]. Type strain: C-28 = ATCC 19607.
- Pseudomonas corrugata* Roberts and Scarlett 1981, 31:216, sp. nov. Type strain: NCPPB 2445 = ATCC 29736.
- Pseudomonas dentrificans* nomen rejiciendum, Opinion 54. 32:466.*
- Pseudomonas ficuserectae* Goto 1983, 33:547,* sp. nov. Type strain: L7 = PDDCC 7848 = ATCC 35104.
- Pseudomonas fuscovaginae* Miyajima, Tani, and Akita 1983, 33:656,* sp. nov., nom. rev. (basonym: "*Pseudomonas fuscovaginae*" Tani, Miyajima, and Akita 1976). Type strain: NCPPB 3085 = PDDCC 5940.
- Pseudomonas maltophilia* Hugh 1981, 31:195,* sp. nov., nom. rev. (basonym: "*Pseudomonas maltophilia*" Hugh and Ryschenkov 1960). Type strain: 810-2 = RH 1168 = ATCC 13637; = *Xanthomonas maltophilia*, 33:409.*
- Pseudomonas marina* (Cobet, Wirsén, and Jones 1970) Baumann, Baumann, Mandel, and Allen 1972 (AL) = *Deleya marina*, 33:801.*
- Pseudomonas meliae* Ogimi 1981, 31:382, sp. nov. Type strain: no. 2 = ATCC 33050.
- Pseudomonas mesophilica* Austin and Goodfellow 1979 (AL) = *Methylobacterium mesophilicum*, 33:876.*
- Pseudomonas perfectomarina* Baumann, Bowditch, Baumann, and Beaman 1983, 33:863,* sp. nov., nom. rev. (basonym: "*Pseudomonas perfectomarinus*" [sic] Zobell and Upham 1944). Type strain: 218 = ATCC 14405.
- Pseudomonas pseudoalcaligenes* subsp. *konjaci* Goto 1983, 33:544,* subsp. nov. Type strain: K2 = PDDCC 7733 = ATCC 33996.
- Pseudomonas radiora* Ito and Iizuka 1971 (AL) = *Methylobacterium radiotolerans*, 33:876.*
- Pseudomonas rhodos* Heumann 1962 (AL) = *Methylobacterium rhodinum*, 33:876.*
- Pseudomonas stanieri* Baumann, Bowditch, Baumann, and Beaman 1983, 33:862,* sp. nov. Type strain: 146 = ATCC 27130.
- Pseudomonas syringae* subsp. *savastanoi* Janse 1982, 32:168,* subsp. nov., nom. rev. (basonym: "*Pseudomonas savastanoi*" Smith 1928). Type strain: NCPPB 639 = ATCC 13522.
- Pseudomonas taeniospiralis* Lalucat, Pares, and Schlegel 1982, 32:337,* sp. nov. Type strain: 2K1 = DSM 2082.
- Pseudonocardia azurea* Omura, Tanaka, Tanaka, Spiri-Nakagawa, Oiwa, Takahashi, Matsuyama, and Iwai 1983, 33:673, sp. nov. Type strain: Am-3696 = FERM-P 4738 = NRRL 11412.
- Pseudonocardia compacta* Henssen, Happach-Kasan, Renner, and Vobis 1983, 33:834,* sp. nov. Type strain: MB H-146 = CBS 160.82 = DSM 43592 = ATCC 35407.
- Pyrodictium* Stetter, König, and Stackebrandt 1984, 34:270, gen. nov. Type species: *P. occultum*.
- Pyrodictium brockii* Stetter, König, and Stackebrandt 1984, 34:270, sp. nov. Type strain: S 1 = DSM 2708.
- Pyrodictium occultum* Stetter, König, and Stackebrandt 1984, 34:270, sp. nov. Type strain: PL-19 = DSM 2709.
- Rahnella* Izard, Gavini, Trinel, and Leclerc 1981, 31:382, gen. nov. Type species: *R. aquatilis*.
- Rahnella aquatilis* Izard, Gavini, Trinel, and Leclerc 1981, 31:382, sp. nov. Type strain: 133 = CIP 78-65 = ATCC 33071.
- Renibacterium* Sanders and Fryer 1980, 30:501,* gen. nov. Type species: *R. salmoninarum*.
- Renibacterium salmoninarum* Sanders and Fryer 1980, 30:501,* sp. nov. Type strain: Lea-1-74 = ATCC 33209.
- Rhizobium fredii* Scholla and Elkan 1984, 34:484,* sp. nov. Type strain: PRC 205 = USDA 205 = ATCC 35423.
- Rhizobium japonicum* (Kirchner 1896) Buchanan 1926 (AL) = *Bradyrhizobium japonicum*, 32:136.*
- Rhizobium loti* Jarvis, Pankhurst, and Patel 1982, 32:378,* sp. nov. Type strain: NZP 2213 = ATCC 33669.
- Rhizobium trifolii* Dangeard 1926 (AL). Strains have 59 to 90% DNA homology with strains of *Rhizobium leguminosarum* (Frank 1879) Frank 1889 (AL), Jarvis, Dick, and Greenwood 1980, 30:50.* (Type strains not tested.)
- Rhodobacter* Imhoff, Truper, and Pfennig 1984, 34:342,* gen. nov. Type species: *R. capsulatus*.
- Rhodobacter adriaticus* Imhoff, Truper, and Pfennig 1984, 34:342,* sp. nov., nom. rev. comb. nov. (basonym: "*Rhodopseudomonas adriatica*" Neutzing, Imhoff, and Truper 1984). Type strain: BN 721(6II) = DSM 2781.
- Rhodobacter capsulatus* (Molisch 1907) Imhoff, Truper, and Pfennig 1984, 34:342,* comb. nov. [basonym: *Rhodopseudomonas capsulata* (AL)]. Type strain: ATCC 11166.
- Rhodobacter sphaeroides* (van Niel 1944) Imhoff, Truper, and Pfennig 1984, 34:342,* comb. nov. [basonym: *Rhodopseudomonas sphaeroides* (AL)]. Type strain: ATCC 17023.
- Rhodobacter sulfidophilus* (Hansen and Veldkamp 1973) Imhoff, Truper, and Pfennig 1984, 34:342,* comb. nov.

- [basonym: *Rhodopseudomonas sulfidophila* (AL)]. Type strain: DSM 1374.
- Rhodococcus aichiensis* Tsukamura 1983, 33:896, sp. nov., nom. rev., corrig. (basonym: “*Rhodococcus aichiense*” [sic] Tsukamura 1982). Type strain: Tsukamura E 9028 = ATCC 33611.
- Rhodococcus chubuensis* Tsukamura 1983, 33:896, sp. nov. Type strain: Tsukamura E 6324 = ATCC 33609.
- Rhodococcus corallinus* (Bergey, Harrison, Breed, Hammer, and Huntoon 1923) Goodfellow and Alderson 1977 (AL) = *Rhodococcus rubropertinctus* (AL), corrig. 34:510,* 30:526.
- Rhodococcus fascians* (Tilford 1936) Goodfellow 1984, 34:503, comb. nov. [basonym: *Corynebacterium fascians* (AL)]. Type strain: ATCC 12974.
- Rhodococcus luteus* Nesterenko, Nogina, Kasumova, Kvasnikov, and Batrakov 1982, 32:6,* 32:469,* comb. nov., nom. rev. (basonym: “*Mycobacterium luteum*” Sohngen 1913). Type strain: 1MV 385 = AUCNM A-594 = ATCC 35014.
- Rhodococcus marinonascens* Helmke and Weyland 1984, 34:137,* sp. nov. Type strain: 3438W = DSM 43752.
- Rhodococcus maris* Nesterenko, Nogina, Kasumova, Kvasnikov, and Batrakov 1982, 32:10,* 32:469,* sp. nov., nom. rev., comb. nov. (basonym: “*Flavobacterium maris*” Harrison 1929). Type strain: 1MV 195 = AUCNM A-593 = ATCC 35013.
- Rhodococcus obuensis* Tsukamura 1983, 33:897, sp. nov., nom. rev. (“*Rhodococcus obuensis*” Tsukamura 1982). Type strain: Tsukamura E 8179 = ATCC 33610.
- Rhodococcus sputi* Tsukamura 1978, 28:170,* (AL) sp. nov. Type strain: 3884 = ATCC 29627.
- Rhodocyclus gelatinosus* (Molisch 1907) Imhoff, Truper, and Pfennig 1984, 34:341,* comb. nov. [basonym: *Rhodopseudomonas gelatinosa* (AL)]. Type strain: ATCC 17011.
- Rhodocyclus tenuis* (Pfennig 1969) Imhoff, Truper, and Pfennig 1984, 34:341,* comb. nov. [basonym: *Rhodospirillum tenue* (AL)]. Type strain: ATCC 25093.
- Rhodopila* Imhoff, Truper, and Pfennig 1984, 34:341,* gen. nov. Type species: *R. globiformis*.
- Rhodopila globiformis* (Pfennig 1974) Imhoff, Truper, and Pfennig, 1984, 34:341,* comb. nov. [basonym: *Rhodopseudomonas globiformis* (AL)] Type strain: DSM 161.
- Rhodopseudomonas adriatica* Neutzling, Imhoff, and Truper 1984, 34:503, sp. nov. Type strain: BN 721 (6II) = DSM 2781 = *Rhodobacter adriaticus*, 34:342.*
- Rhodopseudomonas blastica* Eckersley and Dow 1981, 31:216, sp. nov. Type strain: NCIB 11576 = ATCC 33485.
- Rhodopseudomonas capsulata* (Molisch 1907) van Niel 1944 (AL) = *Rhodobacter capsulatus*, 34:342.*
- Rhodopseudomonas gelatinosa* (Molisch 1907) van Niel 1944 (AL) = *Rhodocyclus gelatinosus*, 34:341.*
- Rhodopseudomonas globiformis* Pfennig 1974 (AL) = *Rhodopila globiformis*, 34:341.*
- Rhodopseudomonas marina* Imhoff 1984, 34:270, sp. nov. Type strain: BN 126 = DSM 2698.
- Rhodopseudomonas rutila* Akiba, Usami, and Horikoshi 1983, 33:555,* sp. nov. Type strain: R1 = ATCC 33872.
- Rhodopseudomonas sphaeroides* van Niel 1944 (AL) = *Rhodobacter sphaeroides*, 34:342.*
- Rhodopseudomonas sulfidophila* Hansen and Veldkamp 1973 (AL) = *Rhodobacter sulfidophilus*, 34:342.*
- Rhodospirillum salexigens* Drews 1982, 32:384, sp. nov. Type strain: WS 68 = DSM 2132.
- Rhodospirillum tenue* Pfennig 1969 (AL) = *Rhodocyclus tenuis*, 34:341.*
- Rhodospiridium paludigenum* Fell and Tallman 1980, 30:658,* sp. nov. Type strain: CBS 6566 = ATCC 46157.
- Rickettsia bellii* Philip, Casper, Anacker, Cory, Hayes, Burgdorfer, and Yunker 1983, 33:105,* sp. nov. Type strain: RML-369C.
- Rickettsia montana* Weiss and Moulder 1984, 34:356, sp. nov., nom. rev. (basonym: “*Rickettsia montana*” Lackman, Bell, Stoenner, and Pickens 1965). Type strain: ATCC VR-611.
- Rickettsia sennetsu* Misao and Kobayashi 1956 (AL) = *Ehrlichia sennetsu*, 34:355.
- Rickettsiella chironomi* Weiss, Dasch, and Chang 1984, 34:356, sp. nov., nom. rev. (basonym: “*Rickettsiella chironomi*” Weiser 1963). Type strain: No culture isolated.
- Rickettsiella grylli* Weiss, Dasch, and Chang 1984, 34:356, sp. nov., nom. rev. (basonym: “*Rickettsiella grylli*” Vago and Martoja 1963). Type strain: No culture isolated.
- Rochalimaea vinsonii* Weiss and Dasch 1982, 32:313,* sp. nov. Type strain: ATCC VR-152.
- Roseburia* Stanton and Savage 1983, 33:626,* gen. nov. Type species: *R. cecicola*.
- Roseburia cecicola* Stanton and Savage 1983, 33:627,* sp. nov. Type strain: ATCC 33874.
- Saccharococcus* Nystrand 1984, 34:503, gen. nov. Type species: *S. thermophilus*.
- Saccharococcus thermophilus* Nystrand 1984, 34:503, sp. nov. Type strain: 657 = CCM 3586.
- Saccharomyces uvarum* Beijerinck 1898 = *Saccharomyces cerevisiae* Hansen 1883, 30:196.*
- Saccharothrix* Labeda, Testa, Lechevalier, and Lechevalier 1984, 34:429,* gen. nov. Type species: *S. australiensis*.
- Saccharothrix australiensis* Labeda, Testa, Lechevalier, and Lechevalier 1984, 34:430* and 35:126,* sp. nov. Type strain: LL-BM782Ce82 = NRRL 11239 = ATCC 31497 corrig.
- Salmonella choleraesuis* (Smith 1894) Weldin 1927 corrig. 1983, 33:425,* [basonym: *S. cholerae-suis* (AL)]. Type strain: ATCC 13312.
- Serratia ficaria* Grimont, Grimont, and Starr 1981, 31:216, sp. nov. Type strain: 4024 = ICPB 4050 = CIP 79.23 = ATCC 33105.
- Serratia grimesii* Grimont, Grimont, and Irino 1983, 33:439, sp. nov. Type strain: ATCC 14460.
- Serratia proteamaculans* subsp. *quinovora* Grimont, Grimont, and Irino 1983, 33:439, subsp. nov. Type strain: 4364 = CIP 8195 = ATCC 33765.
- Sphingobacterium* Yabuuchi, Kaneko, Yano, Moss, and

- Miyoshi 1983, 33:592,* gen. nov. Type species: *S. spiritivorum*.
- Sphingobacterium mizutae* Yabuuchi, Kaneko, Yano, Moss, and Miyoshi 1983, 33:595,* sp. nov. Type strain: GIFU 1203 = ATCC 33299.
- Sphingobacterium multivorum* (Holmes, Owen, and Weaver 1981) Yabuuchi, Kaneko, Yano, Moss, and Miyoshi 1983, 33:594,* comb. nov. (basonym: *Flavobacterium multivorum*, 31:25*). Type strain: GIFU 2812 = NCTC 11343 (sic) = ATCC 33613.
- Sphingobacterium spiritivorum* (Holmes, Owens, and Hollis 1982) Yabuuchi, Kaneko, Yano, Moss, and Miyoshi, 1983, 33:594,* comb. nov. (basonym: *Flavobacterium spiritivorum*, 32:159*). Type strain: GIFU 3101 = CDC E7288 = JCM 1277 = NCTC 11386 = ATCC 33861.
- Spirochaeta* Ehrenberg 1835 (AL); proposal that *S. stenostrepta* Zuelzer 1912 (AL) replace *S. plicatilis* Ehrenberg 1835 (AL) as type species of the genus (Request for an Opinion), 31:105.*
- Spirochaeta aurantia* Canale-Parola 1980, 30:594,* sp. nov., nom. rev. (basonym: "*Spirochaeta aurantia*" Vinzent 1926). Type strain: J1 = ATCC 25082.
- Spirochaeta aurantia* subsp. *aurantia* Canale-Parola 1980, subsp. nov. (Rule 46). Type strain: J1 = ATCC 25082.
- Spirochaeta aurantia* subsp. *stricta* Canale-Parola 1984, 34:356, subsp. nov. Type strain: J4T.
- Spirochaeta isovaleric* Harwood and Canale-Parola 1983, 33:578,* sp. nov. Type strain: MA-2 = DSM 2461 = ATCC 33939.
- Spirochaeta litoralis* Canale-Parola 1980, 30:594* sp. nov., nom. rev. (basonym: "*Spirochaeta litoralis*" Hespell, and Canale-Parola 1970). Type strain: R1 = ATCC 27000.
- Spirochaeta stenostrepta* Zuelzer 1912, proposed as type species of the genus *Spirochaeta* to replace *S. plicatilis* Ehrenberg 1835 (Request for an Opinion), 31:105.*
- Spirochaeta zuelzeri* Canale-Parola 1980, 30:594,* sp. nov., nom. rev. [basonym: "*Spirochaeta zuelzeri*" (Veldkamp 1960) Canale-Parola, Udris, and Mandel 1968]. Type strain: ATCC 19044.
- Spiroplasma apis* Mouches, Bove, Tully, Rose, McCoy, Carle-Junca, Garnier, and Saillard 1984, 34:91, sp. nov. Type strain: B31 = ATCC 33834.
- Spiroplasma floricola* Davis, Lee, and Worley 1981, 31:462,* sp. nov. Type strain: 23-6 = ATCC 29989.
- Spiroplasma mirum* Tully, Whitcomb, Rose, and Bove 1982, 32:99,* sp. nov. Type strain: SMCA = ATCC 29335.
- Spiroplasmataceae* Skripal 1983, 33:408,* fam. nov., nom. rev. (basonym: "*Spiroplasmataceae*" Skripal 1974). Type genus: *Spiroplasma* (AL).
- Sporosarcina halophila* Claus, Fahmy, Rolf, and Tosunoglu 1984, 34:270, sp. nov. Type strain: 3 = DSM 2266.
- Staphylococcus auricularis* Kloos and Schleifer 1983, 33:12,* 33:442,* sp. nov. Type strain: WK 811M = ATCC 33753.
- Staphylococcus caprae* Devriese, Poutrel, Kilpper-Balz, and Schleifer 1983, 33:483,* sp. nov. Type strain: 143.22 = CCM 3573.
- Staphylococcus carnosus* Schleifer and Fischer 1982, 32:153,* sp. nov. Type strain: 361 = DSM 20501.
- Staphylococcus caseolyticus* Schleifer, Kilpper-Balz, Fischer, Faller, and Endl 1982, 32:19,* sp. nov. Type strain: ATCC 13548.
- Staphylococcus gallinarum* Devriese, Poutrel, Kilpper-Balz, and Schleifer 1983, 33:481,* sp. nov. Type strain: VIII₁ = CCM 3572.
- Staphylococcus lentus* (Kloos, Schleifer, and Smith 1976) Schleifer, Geyer, Kilpper-Balz, and Devriese 1983, 33:897, comb. nov. [basonym: *Staphylococcus sciuri* subsp. *lentus* (AL)]. Type strain: Roguinsky K21 = ATCC 29070.
- Staphylococcus saccharolyticus* (Foubert and Douglas 1948) Kilpper-Balz and Schleifer 1984, 34:91, comb. nov. [basonym: *Peptococcus saccharolyticus* (AL)]. Type strain: ATCC 14953.
- Staphylococcus sciuri* subsp. *lentus* Kloos, Schleifer, and Smith 1976 (AL) = *Staphylococcus lentus*, 33:897.
- "*Staphylococcus staphylolyticus*" NRRL B-2628 = biovar of *Staphylococcus simulans* (AL), 32:171.*
- Stomatococcus* Bergan and Kocur 1982, 32:375,* gen. nov. Type species: *S. mucilaginosus*.
- Stomatococcus mucilaginosus* Bergan and Kocur 1982, 32:375,* sp. nov., nom. rev., comb. nov. (basonym: "*Micrococcus mucilaginosus*" Migula 1900). Type strain: CCM 2417 = NCTC 10663 = ATCC 25296.
- Streptococcus casseliflavus* Vaughan, Riggsby, and Mundt 1979, 29:212,* comb. nov. (AL) (Rule 24a) (basonym: "*Streptococcus faecium* subsp. *casseliflavus*" Mundt and Graham 1968). Type strain: ATCC 25788.
- Streptococcus cecorum* Devriese, Dutta, Farrow, van de Kerckhove, and Phillips 1983, sp. nov. 33:774.* Type strain: A60 = NCDO 2674.
- Streptococcus cremoris* Orla-Jensen 1919 (AL) = *Streptococcus lactis* subsp. *cremoris*, 32:453.*
- Streptococcus durans* Knight, Shales, and Messineo 1984, 34:330,* sp. nov. (basonym: "*Streptococcus durans*" Sherman and Wing 1937). Type strain: ATCC 19432 = *Enterococcus durans*, which has precedence, 34:222.*
- Streptococcus dysgalactiae* Garvie, Farrow, and Bramley 1983, 33:404,* sp. nov., nom. rev. (basonym: "*Streptococcus dysgalactiae*" Diernhofer 1932). Type strain: NCDO 2023.
- Streptococcus faecalis* Andrewes and Horder 1906 (AL) = *Enterococcus faecalis*, 34:33.*
- Streptococcus faecium* Orla-Jensen 1919 (AL) = *Enterococcus faecium*, 34:33.*
- Streptococcus ferus* Coykendall 1983, 33:883,* sp. nov., nom. rev. (basonyms: "*Streptococcus mutans* subsp. *ferus*" Coykendall 1976, "*Streptococcus ferus*" Coykendall 1977). Type strain: 8S1 = ATCC 33477.
- Streptococcus gallinarum* Bridge and Sneath 1982, 32:414,* sp. nov. Type strain: F87/276 = PB21 = NCTC 11428 = ATCC 35038 = *Enterococcus gallinarum*, 34:222.*
- Streptococcus garvieae* Collins, Farrow, Phillips, and Kandler 1984, 34:270, sp. nov. Type strain: NCDO 2155.
- Streptococcus lactis* subsp. *cremoris* (Orla-Jensen 1919) Garvie and Farrow 1982, 32:453,* subsp. nov., comb. nov. [basonym: *Streptococcus cremoris* (AL)]. Type strain: NCDO 607 = ATCC 19257.
- Streptococcus lactis* subsp. *diacetilactis* Garvie and Farrow 1982, 32:453,* subsp. nov., nom. rev., comb. nov.

- (basonym: "*Streptococcus diacetilactis*" Matuszewski, Pijanowski, and Supinska 1936). Type strain: NCDO 176.
- Streptococcus lactis* subsp. *lactis* (Lister 1873) Lohnis 1909, 32:455,* subsp. nov. (basonym: *Streptococcus lactis*, Rule 46). Type strain: NCDO 604 = ATCC 19435.
- Streptococcus macacae* Beighton, Hayday, Russell, and Whiley 1984, 34:333,* sp. nov. Type strain: 25-1 = NCTC 11558.
- Streptococcus oralis* Bridge and Sneath 1982, 32:414,* sp. nov. Type strain: LVG 1 = PB182 = NCTC 11427 = ATCC 35037.
- Streptococcus parvulus* (Weinberg, Nativelle, and Prevot 1937) Cato 1983, 33:83,* comb. nov., nom. rev., emend. [basonym: *Peptostreptococcus parvulus* (AL)]. Type strain: ATCC 33793.
- Streptococcus plantarum* Collins, Farrow, Phillips, and Kandler 1984, 34:270, sp. nov. Type strain: NCDO 1869.
- Streptococcus salivarius* subsp. *thermophilus* (Orla-Jensen 1919) Farrow and Collins 1984, 34:356, subsp. nov., comb. nov. [basonym: *Streptococcus thermophilus* (AL)]. Type strain: NCDO 573 = ATCC 19258.
- Streptococcus sobrinus* Coykendall 1983, 33:883,* sp. nov., nom. rev., comb. nov. (basonyms: "*Streptococcus mutans* subsp. *sobrinus*" Coykendall 1974, "*Streptococcus sobrinus* Coykendall 1977). Type strain: SL1 = ATCC 33478.
- Streptococcus thermophilus* Orla-Jensen 1919 (AL) = *Streptococcus salivarius* subsp. *thermophilus*, 34:356.
- Streptomyces armeniacus* (Kalakoutskii and Kusnetsov 1964) Wellington and Williams 1981, 31:80,* comb. nov. [basonym: *Actinoplanes armeniacus* (AL)]. Type strain: ATCC 15676.
- Streptomyces capillispiralis* Mertz and Higgins 1982, 32:123,* sp. nov. Type strain: A49492 = NRRL 12279.
- Streptomyces echinoruber* Palleroni, Reichelt, Mueller, Epps, Tabenkin, Bull, Schuep, and Berger 1981, 31:382, sp. nov. Type strain: X-14077 = NRRL 8144.
- Streptomyces longwoodensis* Prosser and Palleroni 1981, 31:382, sp. nov. Type strain: Roche X-14537 = ATCC 29251.
- Streptomyces sannanensis* Iwasaki, Itoh, and Mori 1981, 31:283, sp. nov. Type strain: KC-7038 = ATCC 31530.
- Streptomyces spinoverrucosus* Diab and Al-Gounaim 1982, 32:331,* sp. nov. Type strain: Diab 163MA = NCIB 11666 = ATCC 33692.
- Streptomyces sulfonofaciens* Miyadoh, Shomura, Ito, and Niida 1983, 33:323,* sp. nov. Type strain: SF-2103 = ATCC 31892.
- Streptosporangium fragile* Shearer, Colman, and Nash 1983, 33:367,* sp. nov. Type strain: SK&F-BC2496 = ATCC 31519.
- Sulfolobus brierleyi* Zillig, Stetter, Wunderl, Schulz, Priess, and Scholz 1980, 30:676, sp. nov. Type strain: DSM 1651.
- Sulfolobus solfataricus* Zillig, Stetter, Wunderl, Schulz, Priess, and Scholz 1980, 30:676, sp. nov. Type strain: DSM 1616 = ATCC 35091.
- Syntrophobacter* Boone and Bryant 1984, 34:356, gen. nov. Type species: *S. wolinii*.
- Syntrophobacter wolinii* Boone and Bryant 1984, 34:356, sp. nov. Type strain: DB maintained as a coculture with *Desulfovibrio* sp. strain: G-11; coculture = DSM 2805.
- Syntrophomonas* McInerney, Bryant, Hespell, and Costerton 1982, 32:267, gen. nov. Type species: *S. wolfei*.
- Syntrophomonas wolfei* McInerney, Bryant, Hespell, and Costerton 1982, 32:267, sp. nov. Type strain: Gottingen G311 = DSM 2245.
- Syntrophus* Mountfort, Brulla, Krumholz, and Bryant 1984, 34:216,* gen. nov. Type species: *S. buswellii*.
- Syntrophus buswellii* Mountfort, Brulla, Krumholz, and Bryant 1984, 34:216,* sp. nov. Type strain: DM-2 = DSM 2612A.
- Tatlockia* Garrity, Brown, and Vickers 1980, 30:612,* gen. nov. Type species: *T. micdadei*.
- Tatlockia micdadei* Garrity, Brown, and Vickers 1980, 30:612,* sp. nov., nom. rev., comb. nov. (basonym: "*Legionella micdadei*" Hebert, Steigerwalt, and Brenner 1980). Type strain: TATLOCK = ATCC 33218. (Note: *Tatlockia micdadei* has priority.)
- Tatumella* Hollis, Hickman, and Fanning 1982, 32:267, gen. nov. Type species: *T. ptyseos*.
- Tatumella ptyseos* Hollis, Hickman, and Fanning 1982, 32:267, sp. nov. Type strain: H36 = CDC D6168 = CDC 9591-78 = ATCC 33301.
- Taylorella* Sugimoto, Isayama, Sakazaki, and Kuramochi 1984, 34:503, gen. nov. Type species: *T. equigenitalis*.
- Taylorella equigenitalis* (Taylor, Rosenthal, Brown, Lapage, Hill, and Legros 1983) Sugimoto, Isayama, Sakazaki, and Kuramochi 1984, 34:503, comb. nov. (basonym: *Haemophilus equigenitalis*, 33:439). Type strain: 61717/77 = NCTC 11184.
- Tectibacter* Preer and Preer 1982, 32:140,* gen. nov., nom. rev. (basonym: "*Tectobacter*" [sic] Preer, Preer, and Jurand 1974) Type species: *T. vulgaris*.
- Tectibacter vulgaris* Preer and Preer 1982, 32:140,* sp. nov., nom. rev. (basonym: "*Tectobacter* [sic] *vulgaris*" Preer, Preer, and Jurand 1974). Type strain: 225 = ATCC 30697.
- Tenericutes* Murray 1984, 34:356, div. nov. Type class: *Mollicutes*.
- Thermoactinomyces intermedius* Kurup, Hollick, and Pagan 1981, 31:216, sp. nov. Type strain: T-323 = ATCC 33205.
- Thermoanaerobacter* Wiegel and Ljungdahl 1982, 32:384, gen. nov. Type species: *T. ethanolicus*.
- Thermoanaerobacter ethanolicus* Wiegel and Ljungdahl 1982, 32:384, sp. nov. Type strain: JW 200 = ATCC 31550.
- Thermoanaerobium* Zeikus, Hegge, and Anderson 1983, 33:673, gen. nov. Type species: *T. brockii*.
- Thermoanaerobium brockii* Zeikus, Hegge, and Anderson 1983, 33:673, sp. nov. Type strain: HTD4 = DSM 1457 = ATCC 33075.
- Thermobacteroides* Ben-Bassat and Zeikus 1983, 33:673, gen. nov. Type species: *T. acetoethylicus*.
- Thermobacteroides acetoethylicus* Ben-Bassat and Zeikus 1983, 33:673, sp. nov. Type strain: HTB2 = ATCC 33265.
- Thermococcus* Zillig, Holz, Janekovic, Schafer, and Reiter 1983, 33:673, gen. nov. Type species: *T. celer*.

- Thermococcus celer* Zillig, Holz, Janekovic, Schafter, and Reiter 1983, 33:673, sp. nov. Type strain: DSM 2476.
- Thermofilum* Zillig, Gierl, Schreiber, Wunderl, Janekovic, Stetter, and Klenk 1983, 33:673, gen. nov. Type species: *T. pendens*.
- Thermofilum pendens* Zillig, Gierl, Schreiber, Wunderl, Janekovic, Stetter, and Klenk 1983, 33:673, sp. nov. Type strain: Hv3 = DSM 2475.
- Thermomonospora chromogena* McCarthy and Cross 1984, 34:356, sp. nov. nom. rev., comb. nov. (basonym: "*Actinobifida chromogena*" Krasil'nikov and Agre 1965; synonym: "*Thermomonospora falcata*" Henssen 1970). Type strain: Agre no. 577 = NCIB 10212.
- Thermomonospora fusca* McCarthy and Cross 1984, 34:356, sp. nov., nom. rev. (basonym: "*Thermomonospora fusca*" Henssen 1957). Type strain: 190 Th = ATCC 27730.
- Thermoproteaceae* Zillig and Stetter 1982, 32:267, fam. nov. Type genus: *Thermoproteus*.
- Thermoproteales* Zillig and Stetter 1982, 32:267, ord. nov. Type family: *Thermoproteaceae*.
- Thermoproteus* Zillig and Stetter 1982, 32:267, gen. nov. Type species: *T. tenax*.
- Thermoproteus tenax* Zillig and Stetter 1982, 32:267, sp. nov. Type strain: DSM 2078.
- Thermothrix* Caldwell, Caldwell, and Laycock 1981, 31:217, gen. nov. Type species: *T. thiopara*.
- Thermothrix thiopara* Caldwell, Caldwell, and Laycock 1981, 31:217, sp. nov. Type strain: ATCC 29244.
- Thermus ruber* Loginova, Egorova, Golovacheva, and Seregina 1984, 34:498,* sp. nov., nom. rev. (basonym: "*Thermus ruber*" Lobinova, Egorova, Golovacheva, and Seregina 1975). Type strain: Loginova 21 = AUCM 1258.
- Thiobacillus acidophilus* Harrison 1983, 33:217,* sp. nov., nom. rev. (basonym: "*Thiobacillus acidophilus*" Guay and Silver 1975). Type strain: ATCC 27807.
- Thiobacillus delicatus* Katayama-Fujimura, Kawashima, Tsuzaki, and Kuraishi 1984, 34:142,* sp. nov., nom. rev., emend. (basonym: "*Thiobacillus delicatus*" Mizoguchi, Sato, and Okabe 1976). Type strain: THI 091 = IAM 12624.
- Thiobacillus rapidicrescens* Katayama-Fujimura, Kawashima, Tsuzaki, and Kuraishi 1983, 33:536,* sp. nov. Type strain: THI 041 = ATCC 25364.
- Thiobacillus versutus* Harrison 1983, 33:216,* sp. nov. Type strain: A2 = ATCC 25364.
- Thioploca araucae* Maier and Gallardo 1984, 34:417,* sp. nov. Type strain: No pure culture.
- Thioploca chileae* Maier and Gallardo 1984, 34:417,* sp. nov. Type strain: No pure culture.
- Thioploca ingrica* Maier 1984, 34:344,* sp. nov., nom. rev. (basonym: "*Thioploca ingrica*" Vislouch 1911) Type strain: no pure culture.
- Thiosphaera* Robertson and Kuenen 1984, 34:91, gen. nov. Type species: *T. pantotropa*.
- Thiosphaera pantotropa* Robertson and Kuenen 1984, 34:91, sp. nov. Type strain: GB17 = LMD 82.5.
- Treponema bryantii* Stanton and Canale-Parola 1980, 30:676, sp. nov. Type strain: RUS-1 = DSM 1788 = ATCC 33254.
- Treponema paraluis-cuniculi* (Jacobsthal 1920) Smibert 1974 corrig. [basonym: *Treponema paraluis-cuniculi* (AL)] 33:425.* (No culture available.)
- Treponema pectinovorum* Smibert and Burmeister 1983, 33:853,* sp. nov. Type strain: VPI D-36DR-2 = ATCC 33768.
- Treponema socranskii* Smibert, Johnson, and Ranney 1984, 34:459,* sp. nov. Type strain: VPI DR56BR116 = ATCC 35536.
- Treponema socranskii* subsp. *buccale* Smibert, Johnson, and Ranney 1984, 34:461,* subsp. nov. Type strain: VPI D2B8 = ATCC 35534.
- Treponema socranskii* subsp. *paredis* Smibert, Johnson, and Ranney 1984, 34:461,* subsp. nov. Type strain: VPI D46CPE1 = ATCC 35535.
- Treponema socranskii* subsp. *socranskii* Smibert, Johnson, and Ranney 1984, 34:461,* subsp. nov. Type strain: ATCC 35536.
- Treponema succinifaciens* Cwyk and Canale-Parola 1981, 31:383, sp. nov. Type strain: 6091 = ATCC 33096.
- Trichococcus* Scheff, Salcher, and Lingens 1984, 34:356, gen. nov. Type species: *T. flocculiformis*.
- Trichococcus flocculiformis* Scheff, Salcher, and Lingens 1984, 34:356, sp. nov. Type strain: Echt = DSM 2094.
- Ureaplasma diversum* Howard and Gourlay 1982, 32:450,* sp. nov. Type strain: A417 = NCTC 10182.
- Vampirovibrio* Gromov and Mamkayeva 1980, 30:676, gen. nov. Type species: *V. chlorellavorus*.
- Vampirovibrio chlorellavorus* Gromov and Mamkayeva 1980, 30:676, sp. nov. Type strain: ATCC 29753.
- Veillonella alcalescens* subsp. *criceti* Rogosa 1965 (AL) = *Veillonella criceti*, 32:35.*
- Veillonella alcalescens* subsp. *dispar* Rogosa 1965 (AL) = *Veillonella dispar*, 32:35.*
- Veillonella alcalescens* subsp. *ratti* Rogosa 1965 (AL) = *Veillonella ratti*, 32:35.*
- Veillonella atypica* (Rogosa 1965) Mays, Holdeman, Moore, Rogosa, and Johnson 1982, 32:35,* sp. nov., comb. nov. [basonym: *Veillonella parvula* subsp. *atypica* (AL)] Type strain: ATCC 17744.
- Veillonella caviae* Mays, Holdeman, Moore, Rogosa, and Johnson 1982, 32:35,* sp. nov. Type strain: ATCC 33540.
- Veillonella criceti* (Rogosa 1965) Mays, Holdeman, Moore, Rogosa, and Johnson 1982, 32:35,* sp. nov., comb. nov. [basonym: *Veillonella alcalescens* subsp. *criceti* (AL)]. Type strain: ATCC 17747.
- Veillonella dispar* (Rogosa 1965) Mays, Holdeman, Moore, Rogosa, and Johnson 1982, 32:35,* sp. nov., comb. nov. [basonym: *Veillonella alcalescens* subsp. *dispar* (AL)]. Type strain: ATCC 17748.
- Veillonella parvula* subsp. *atypica* Rogosa 1965 (AL) = *Veillonella atypica*, 32:35.*
- Veillonella parvula* subsp. *rodentium* Rogosa 1965 (AL) = *Veillonella rodentium*, 32:35.*
- Veillonella ratti* (Rogosa 1965) Mays, Holdeman, Moore, Rogosa, and Johnson 1982, 32:35,* sp. nov., comb. nov. [basonym: *Veillonella alcalescens* subsp. *ratti* (AL)]. Type strain: ATCC 17746.
- Veillonella rodentium* (Rogosa 1965) Mays, Holdeman, Moore, Rogosa, and Johnson 1982, 32:35,* sp. nov.,

- comb. nov. [basonym: *Veillonella parvula* subsp. *rodentium* (AL)]. Type strain: ATCC 17743.
- Vibrio aestuarianus* Tison and Seidler 1983, **33**:699,* sp. nov. Type strain: OY-0-002 = ATCC 35048.
- Vibrio albensis* Lehmann and Neumann 1896 (AL) = *Vibrio cholerae* Pacini 1854 (AL). (82% DNA homology. Reichelt, Baumann, and Baumann 1976. Arch. Microbiol. **110**:101-120.
- Vibrio alginolyticus* subsp. (chemovar.) *iophagus* Emod, Soubigou, Tong, Keil, and Richard 1983, **33**:458,* subsp. nov., comb. nov. (basonym: "*Achromobacter iophagus*" Welton and Woods 1973). Type strain: CIP I.029.
- Vibrio campbellii* Baumann, Baumann, Bang, and Woolkalis 1981, **31**:217, comb. nov. [basonym: *Beneckea campbellii* (AL)]. Type strain: ATCC 25920.
- Vibrio damsela* Love, Teebken-Fisher, Hose, Farmer, Hickman, and Fanning 1982, **32**:267, sp. nov. Type strain: CDC 2588-80 = ATCC 33539.
- Vibrio diazotrophicus* Guerinot, West, Lee, and Colwell 1982, **32**:356,* sp. nov. Type strain: 1 = NS1 = ATCC 33466.
- Vibrio fluvialis* Lee, Shread, Furniss, and Bryant 1981, **31**:217, sp. nov. Type strain: VL 5125 = NCTC 11327 = ATCC 33809.
- Vibrio furnissii* Brenner, Hickman-Brenner, Lee, Steigerwalt, Fanning, Hollis, Farmer, Weaver, Joseph, and Seidler 1984, **34**:91, sp. nov. Type strain: CDC B3215 = ATCC 35016.
- Vibrio gazogenes* Baumann, Baumann, Bang, and Woolkalis 1981, **31**:217, sp. nov., nom. rev., comb. nov. (basonym: "*Beneckea gazogenes*" Harwood, 1978). Type strain: PB1 = ATCC 29988.
- Vibrio harveyi* (Johnson and Shunk 1936) Baumann, Baumann, Bang, and Woolkalis 1981, **31**:217, comb. nov. [basonym: *Beneckea harveyi* (AL)]. Type strain: ATCC 14126.
- Vibrio hollisae* Hickman, Farmer, Hollis, Fanning, Steigerwalt, Weaver, and Brenner 1982, **32**:384, sp. nov. Type strain: CDC 0075-80 = ATCC 33564.
- Vibrio logei* (Harwood, Bang, Baumann, and Nealson 1980) Baumann, Baumann, Bang, and Woolkalis 1981, **31**:217, comb. nov. (basonym: *Photobacterium logei* **30**:655*). Type strain: 584 = ATCC 29985.
- Vibrio marinus* Baumann, Furniss, and Lee 1984, **34**:356, sp. nov., nom. rev. [basonym: "*Vibrio marinus*" (Russell 1892) Ford 1927]. Type strain: ATCC 15381.
- Vibrio mimicus* Davis, Fanning, Madden, Steigerwalt, Bradford, Smith, and Brenner 1982, **32**:267, sp. nov. Type strain: 1721-77 = ATCC 33653.
- Vibrio natriegens* (Payne, Eagon, and Williams 1961) Baumann, Baumann, Bang, and Woolkalis 1981, **31**:217, comb. nov. [basonym: *Beneckea natriegens* (AL)]. Type strain: ATCC 14048.
- Vibrio nereis* (Harwood, Bang, Baumann, and Nealson 1980) Baumann, Baumann, Bang, and Woolkalis 1981, **31**:217, comb. nov. (basonym: *Beneckea nereida*, **30**:655). Type strain: 80 = ATCC 25917.
- Vibrio nigrapulchritudo* (Baumann, Baumann, Mandel, and Allen 1971) Baumann, Baumann, Bang, and Woolkalis 1981, **31**:217, comb. nov. [basonym: *Beneckea nigrapulchritudo* (AL)]. Type strain: ATCC 27043.
- Vibrio ordalii* Schiewe, Trust, and Crosa 1982, **32**:384, sp. nov. Type strain: DF3K = ATCC 33509.
- Vibrio orientalis* Yang, Yeh, Cao, Baumann, Baumann, Tang, and Beaman 1983, **33**:673, sp. nov. Type strain: 717 = ATCC 33934.
- Vibrio pelagius* (Baumann, Baumann, and Mandel 1971) Baumann, Baumann, Bang, and Woolkalis 1981, **31**:217, comb. nov. [basonym: *Beneckea pelagia* (AL)]. Type strain: ATCC 25916.
- Vibrio proteolyticus* Baumann, Baumann, Bang, and Woolkalis 1982, **32**:267, sp. nov. Type strain: NCMB 1326 (corrig.) = ATCC 15338 (corrig. **33**:673).
- Vibrio splendidus* (Beijerinck 1900) Baumann, Baumann, Bang, and Woolkalis 1981, **31**:217, comb. nov. [basonym: *Beneckea splendida* (AL)]. Type strain: NCMB 1 = ATCC 33125.
- Vibrio succinogenes* Wolin, Wolin, and Jacobs 1961 (AL) = *Wolinella succinogenes*, **31**:439.*
- Vibrio tubiashii* Hada, West, Lee, Stemmler, and Colwell 1984, **34**:2,* sp. nov. Type strain: ATCC 19109.
- Vibrio vulnificus* (Reichelt, Baumann, and Baumann 1979) Farmer 1980, **30**:656,* comb. nov. [basonym: *Beneckea vulnifica* (AL)]. Type strain: ATCC 27562.
- Wolinella* Tanner, Badger, Lai, Listgarten, Visconti, and Socransky 1981, **31**:439,* gen. nov. Type species: *W. succinogenes*.
- Wolinella curva* Tanner, Listgarten, and Ebersole 1984, **34**:279,* sp. nov. Type strain: VPI 9584 = ATCC 35224.
- Wolinella recta* Tanner, Badger, Lai, Listgarten, Visconti, and Socransky 1981, **31**:441,* sp. nov. Type strain: FDC 371 = ATCC 33238.
- Wolinella succinogenes* (Wolin, Wolin, and Jacobs 1961) Tanner, Badger, Lai, Listgarten, Visconti, and Socransky 1981, **31**:439,* comb. nov. [basonym: *Vibrio succinogenes* (AL)]. Type strain: ATCC 29543.
- Xanthomonas maltophilia* (Hugh 1981) Swings, DeVos, Van den Mooter, De Ley 1983, **33**:409,* comb. nov. (basonym: *Pseudomonas maltophilia*, **31**:195). Type strain: 810-2 = RH 1168 = ATCC 13637.
- Yersinia aldovae* Bercovier, Steigerwalt, Guiyoule, Huntley-Carter, and Brenner 1984, **34**:171,* sp. nov. Type strain: CNY 6005 = CDC 669-83 = ATCC 35236.
- Yersinia frederiksenii* Ursing, Brenner, Bercovier, Fanning, Steigerwalt, Brault, and Mollaret 1981, **31**:217, sp. nov. Type strain: 6175 = CIP 80-29 = ATCC 33641.
- Yersinia intermedia* Brenner, Bercovier, Ursing, Alonso, Steigerwalt, Fanning, Carter, and Mollaret 1981, **31**:217, sp. nov. Type strain: 3953 = Bottone 48 = Chester 48 = CIP 80-28 = ATCC 29909.
- Yersinia kristensenii* Bercovier, Ursing, Brenner, Steigerwalt, Fanning, Carter, and Mollaret 1981, **31**:217, sp. nov. Type strain: 105 = CIP 80-30 = ATCC 33638.
- Yersinia pseudotuberculosis* subsp. *pestis* (Lehmann and Neumann 1896) Bercovier, Mollaret, Alonso, Brault, Fanning, Steigerwalt, and Brenner 1981, **31**:383, subsp. nov., comb. nov. [basonym: *Yersinia pestis* (AL)]. Type strain: NCTC 5923 = ATCC 19428. (Judicial action pending.)
- Yersinia pseudotuberculosis* subsp. *pseudotuberculosis* (Pfeiffer 1889) Smith and Thal 1965, subsp. nov. (Rule 46). Type strain: ATCC 29833.

Abbreviations and Addresses for Major Culture Collections Cited^a

Abbreviation	Name and address	Abbreviation	Name and address
ATCC	American Type Culture Collection 12301 Parklawn Dr. Rockville, MD 20852 USA	GIEM	Gamaleya Institute of Epidemiology and Microbiology Academy of Medical Sciences, Moscow, USSR
AUCM	All-Union Collection of Microorganisms c/o Department of Type Cultures of Micro- organisms Institute of Biochemistry & Physiology of Microorganisms USSR Academy of Sciences Pushchino Moscow Region 142292, USSR	HMGB	Hungarian Microbiology Gene Bank Microbiological Department Group of the Department of Food Technol- ogy and Microbiology of the University of Horticulture 1064 Budapest, Izabella, Hungary
AUCNM	All-Union Collection of Non-Pathogenic Microorganisms (<i>see</i> AUCM)	IAM	Institute of Applied Microbiology University of Tokyo Yayoi, Bunko-Ku Tokyo, Japan
BKM	<i>See</i> AUCM	IBPhM	Department of Type Cultures of Microor- ganisms Institute of Biochemistry and Physiology of Microorganisms USSR Academy of Sciences Pushchino Moscow Region 142292, USSR
CBS	Centraalbureau voor Schimmelcultures Oosterstraat 1, Baarn, The Netherlands	ICPB	Professor of Bacteriology Curator ICPB International Collection of Phytopathogenic Bacteria Department of Bacteriology University of California Davis, CA 95616 USA
CBS	Centraalbureau voor Schimmelcultures, Yeast Division Julianalaan 67A Delft, The Netherlands	IFO	Institute for Fermentation, Osaka 17-85 Juso-Honmachi 2-Chome, Yodogawa-Ku Osaka, Japan
CCM	Czechoslovak Collection of Microorga- nisms J. E. Purkyne University of Brno Tr. Obrancu Miru 10 66243 Brno, Czechoslovakia	IMET	Institute for Microbiology and Experimen- tal Therapy Beutenbergstrasse 11 Jena 69, German Democratic Republic
CCUG	Culture Collection, University of Goteborg Department of Clinical Bacteriology Institute of Clinical Bacteriology, Immu- nology and Virology Guldhedsgatn 10A s-413 46 Goteborg, Sweden	IMRU	Rutgers University The State University of New Jersey Waksman Institute of Microbiology P.O. Box 759 Piscataway, NJ 08854 USA
CDC	Centers for Disease Control 1600 Clifton Rd. Atlanta, GA 30333. USA	INMI	Institute for Microbiology USSR Academy of Sciences Profsojuznaja 7 Moscow B-133, USSR
CIP	Collection de l'Institut Pasteur Institute Pasteur 28 Rue du Docteur Roux 75724 Paris, Cedex 15, France	JCM	Japanese Collection of Microorganisms Riken, Wako-shi Saitama 351, Japan
CNRZ	Centre National de Recherches Zootechni- ques Jouy-en-Josas, France	LMD	Culture Collection Laboratory of Microbiology Julianalaan 67A 2628 BC Delft, The Netherlands
CUETM	Collection Unité Ecotoxicologie Micro- bienne, Institute National de la Santé et de la Recherche Médicale Jules Guesde, 369 Villeneuve d'Ascq Nord, France	NCDO	National Collection of Dairy Organisms National Institute for Research in Dairying Shinfield, Reading Berkshire RG2 9AT, United Kingdom
DSM	Deutsche Sammlung von Mikroorganismen Grisebachstr. 8 D-3400 Göttingen, Federal Republic of Germany		

Continued on following page

Abbreviations and Addresses for Major Culture Collections Cited^a

Abbreviation	Name and address	Abbreviation	Name and address
NCIB.....	National Collection of Industrial Bacteria Torry Research Station P.O. Box 31, 135 Abbey Rd. Aberdeen AB9 8DG, Scotland		Private Bag Auckland, New Zealand
NCMB.....	National Collection of Marine Bacteria (<i>see</i> NCIB)	RML	National Institute of Allergy and Infectious Diseases Rocky Mountain Laboratories Collection Hamilton, MT 59840 USA
NCPBP	National Collection of Plant Pathogenic Bacteria Plant Pathology Laboratory Hatching Green, Harpenden Hertfordshire AL5 2BD, United Kingdom	UCM	<i>See</i> AUCM
NCTC	National Collection of Type Cultures Central Public Health Laboratory Collindale Ave. London NW9 5HT, United Kingdom	UWO	University of Western Ontario Culture Collection Department of Plant Sciences London, Ontario N6A 587, Canada
NRC (NRCC).....	National Research Council 100 Sussex Drive Ottawa, Ontario K1A 0R6, Canada	UQM	University of Queensland Department of Microbiology St. Lucia Queensland 4067, Australia
NRRL	Northern Regional Research Center U.S. Department of Agriculture 1815 North University St. Peoria, IL 61604 USA	VKM	<i>See</i> AUCM
PDDCC.....	Plant Diseases Division Culture Collection Plant Diseases Division D.S.I.R. Mt. Albert Rd.	WR.....	Queensland Wheat Research Institute 13 Holberton Street Toowoomba Queensland, Australia

^a Type strains that are not maintained by national collections should be obtained from the authors of the published descriptions.