

# S1 Dataset. Chemoreceptor COG assignment for 43 *Enterobacteriales* genomes.

## **Citrobacter koseri** ATCC BAA-895

Ci.kos.578-CKO\_03442-YP\_001454958.1-36H-COG1  
Ci.kos.578-CKO\_01067-YP\_001452646.1-36H-COG1  
Ci.kos.578-CKO\_04394-YP\_001455885.1-36H-COG1  
Ci.kos.578-CKO\_01066-YP\_001452645.1-36H-COG1  
Ci.kos.578-CKO\_03622-YP\_001455137.1-36H-COG1  
Ci.kos.578-CKO\_04484-YP\_001455975.1-36H-COG2  
Ci.kos.578-CKO\_04485-YP\_001455976.1-36H-COG3  
Ci.kos.578-CKO\_03983-YP\_001455491.1-36H-COG3  
Ci.kos.578-CKO\_01456-YP\_001453025.1-36H-COG6  
Ci.kos.578-CKO\_01287-YP\_001452863.1-36H-COG8  
Ci.kos.578-CKO\_01544-YP\_001453112.1-Uncat-COG12  
Ci.kos.578-CKO\_03716-YP\_001455228.1-36H-COG13  
Ci.kos.578-CKO\_01528-YP\_001453097.1-36H-COG13  
Ci.kos.578-CKO\_03599-YP\_001455114.1-36H-COG41

## **Citrobacter rodentium** ICC168

Ci.rod.62-ROD\_48461-YP\_00386233.1-36H-COG1  
Ci.rod.62-ROD\_19331-YP\_003365490.1-36H-COG1  
Ci.rod.62-ROD\_32641-YP\_003366748.1-36H-COG1  
Ci.rod.62-ROD\_48071-YP\_003368199.1-36H-COG2  
Ci.rod.62-ROD\_48061-YP\_003368198.1-36H-COG2  
Ci.rod.62-ROD\_16161-YP\_003365194.1-36H-COG6  
Ci.rod.62-ROD\_32921-YP\_003366773.1-36H-COG41

## **Cronobacter sakazakii** ATCC BAA-894

Cr.sak.579-ESA\_03402-YP\_001439456.1-36H-COG1  
Cr.sak.579-ESA\_01348-YP\_001437444.1-36H-COG1  
Cr.sak.579-ESA\_00560-YP\_001436686.1-36H-COG1  
Cr.sak.579-ESA\_00210-YP\_001436348.1-36H-COG1  
Cr.sak.579-ESA\_01126-YP\_001437230.1-36H-COG1  
Cr.sak.579-ESA\_03488-YP\_001439539.1-36H-COG2  
Cr.sak.579-ESA\_03489-YP\_001439540.1-36H-COG3  
Cr.sak.579-ESA\_pESA3p05464-YP\_001440497.1-36H-COG4  
Cr.sak.579-ESA\_01890-YP\_001437980.1-36H-COG4  
Cr.sak.579-ESA\_00340-YP\_001436475.1-36H-COG4  
Cr.sak.579-ESA\_00239-YP\_001436376.1-36H-COG5  
Cr.sak.579-ESA\_01710-YP\_001437800.1-36H-COG6  
Cr.sak.579-ESA\_pESA3p05527-YP\_001440560.1-36H-COG7  
Cr.sak.579-ESA\_01507-YP\_001437601.1-36H-COG8  
Cr.sak.579-ESA\_00195-YP\_001436332.1-36H-COG9  
Cr.sak.579-ESA\_02212-YP\_001438297.1-36H-COG10  
Cr.sak.579-ESA\_pESA3p05532-YP\_001440565.1-36H-COG10  
Cr.sak.579-ESA\_03817-YP\_001439839.1-24H-COG11  
Cr.sak.579-ESA\_01817-YP\_001437907.1-36H-COG12  
Cr.sak.579-ESA\_02815-YP\_001438881.1-36H-COG13  
Cr.sak.579-ESA\_01914-YP\_001438004.1-36H-COG14  
Cr.sak.579-ESA\_02734-YP\_001438802.1-36H-COG17  
Cr.sak.579-ESA\_00230-YP\_001436367.1-36H-COG30  
Cr.sak.579-ESA\_01321-YP\_001437417.1-36H-COG34  
Cr.sak.579-ESA\_02198-YP\_001438283.1-36H-COG77  
Cr.sak.579-ESA\_00603-YP\_001436723.1-Uncat-COG81

## **Cronobacter turicensis** z3032

Cr.tur.6-CTU\_05670-YP\_003208930.1-36H-COG1  
Cr.tur.6-CTU\_33010-YP\_003211666.1-36H-COG1  
Cr.tur.6-CTU\_25780-YP\_003210941.1-36H-COG1  
Cr.tur.6-CTU\_36610-YP\_003212024.1-36H-COG1  
Cr.tur.6-CTU\_27880-YP\_003211151.1-36H-COG1  
Cr.tur.6-CTU\_04790-YP\_003208842.1-36H-COG2  
Cr.tur.6-CTU\_04770-YP\_003208841.1-36H-COG3  
Cr.tur.6-CTU\_1p00330-YP\_003212609.1-36H-COG4  
Cr.tur.6-CTU\_36270-YP\_003211990.1-36H-COG5  
Cr.tur.6-CTU\_22440-YP\_003210607.1-36H-COG6  
Cr.tur.6-CTU\_1p00800-YP\_003212656.1-36H-COG7  
Cr.tur.6-CTU\_24140-YP\_003210777.1-36H-COG8  
Cr.tur.6-CTU\_36740-YP\_003212037.1-36H-COG9  
Cr.tur.6-CTU\_17110-YP\_003210074.1-36H-COG10  
Cr.tur.6-CTU\_1p00850-YP\_003212661.1-36H-COG10  
Cr.tur.6-CTU\_21650-YP\_003210528.1-36H-COG12  
Cr.tur.6-CTU\_10630-YP\_003209426.1-36H-COG13  
Cr.tur.6-CTU\_20740-YP\_003210437.1-36H-COG14  
Cr.tur.6-CTU\_29530-YP\_003211316.1-36H-COG15  
Cr.tur.6-CTU\_12280-YP\_003209591.1-36H-COG17  
Cr.tur.6-CTU\_32670-YP\_003211630.1-Uncat-COG19  
Cr.tur.6-CTU\_26050-YP\_003210968.1-36H-COG34  
Cr.tur.6-CTU\_24550-YP\_003210818.1-36H-COG43  
Cr.tur.6-CTU\_36340-YP\_003211997.1-36H-COG55  
Cr.tur.6-CTU\_35450-YP\_003211908.1-36H-COG73  
Cr.tur.6-CTU\_17780-YP\_003210141.1-36H-COG78  
Cr.tur.6-CTU\_20980-YP\_003210461.1-36H-COG79  
Cr.tur.6-CTU\_01830-YP\_003208546.1-24H-COG97

## **Dickeya dadantii** 3937

Di.dad.235-Dda3937\_02779-YP\_003883640.1-36H-COG1  
Di.dad.235-Dda3937\_01559-YP\_003882087.1-36H-COG1  
Di.dad.235-Dda3937\_03500-YP\_003882750.1-36H-COG1  
Di.dad.235-Dda3937\_03498-YP\_003882752.1-36H-COG1

Di.dad.235-Dda3937\_02184-YP\_003884754.1-36H-COG1  
Di.dad.235-Dda3937\_03499-YP\_003882751.1-36H-COG1  
Di.dad.235-Dda3937\_01005-YP\_003883346.1-36H-COG1  
Di.dad.235-Dda3937\_03501-YP\_003882749.1-36H-COG1  
Di.dad.235-Dda3937\_00027-YP\_003883574.1-36H-COG2  
Di.dad.235-Dda3937\_03462-YP\_003884507.1-36H-COG2  
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Di.dad.235-Dda3937\_00184-YP\_003884396.1-36H-COG3  
Di.dad.235-Dda3937\_03145-YP\_003883374.1-36H-COG3  
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Di.dad.235-Dda3937\_02665-YP\_003881279.1-36H-COG6  
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Di.dad.235-Dda3937\_00563-YP\_003882977.1-36H-COG12  
Di.dad.235-Dda3937\_02872-YP\_003881243.1-36H-COG15  
Di.dad.235-Dda3937\_02028-YP\_003880923.1-36H-COG16  
Di.dad.235-Dda3937\_01627-YP\_003883083.1-Uncat-COG19  
Di.dad.235-Dda3937\_01293-YP\_003881173.1-36H-COG20  
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Di.dad.235-Dda3937\_02025-YP\_003880920.1-36H-COG22  
Di.dad.235-Dda3937\_02635-YP\_003884565.1-36H-COG23  
Di.dad.235-Dda3937\_02026-YP\_003880921.1-36H-COG24  
Di.dad.235-Dda3937\_03142-YP\_003883377.1-36H-COG35  
Di.dad.235-Dda3937\_02163-YP\_003883266.1-36H-COG36  
Di.dad.235-Dda3937\_02027-YP\_003880922.1-36H-COG37  
Di.dad.235-Dda3937\_02023-YP\_003880918.1-36H-COG38  
Di.dad.235-Dda3937\_00404-YP\_003884690.1-36H-COG52  
Di.dad.235-Dda3937\_03722-YP\_003883159.1-36H-COG56  
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Di.dad.235-Dda3937\_00072-YP\_003882745.1-36H-COG91  
Di.dad.235-Dda3937\_04369-YP\_003883993.1-36H-COG93  
Di.dad.235-Dda3937\_02134-YP\_003884805.1-Uncat-COG99

## **Dickeya zeae** Ech1591

Di.zea.1140-Dd1591\_1542-YP\_003003875.1-36H-COG1  
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Di.zea.1140-Dd1591\_2407-YP\_003004727.1-36H-COG1  
Di.zea.1140-Dd1591\_0395-YP\_003002764.1-36H-COG1  
Di.zea.1140-Dd1591\_1804-YP\_003004134.1-36H-COG1  
Di.zea.1140-Dd1591\_0695-YP\_003003055.1-36H-COG2  
Di.zea.1140-Dd1591\_1602-YP\_003003935.1-36H-COG2  
Di.zea.1140-Dd1591\_1453-YP\_003003794.1-36H-COG2  
Di.zea.1140-Dd1591\_0769-YP\_003003127.1-36H-COG2  
Di.zea.1140-Dd1591\_1802-YP\_003004132.1-36H-COG3  
Di.zea.1140-Dd1591\_0805-YP\_003003163.1-36H-COG3  
Di.zea.1140-Dd1591\_1799-YP\_003004110.1-36H-COG3  
Di.zea.1140-Dd1591\_0055-YP\_003004247.1-36H-COG4  
Di.zea.1140-Dd1591\_1879-YP\_003002028.1-36H-COG4  
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Di.zea.1140-Dd1591\_1838-YP\_003004168.1-36H-COG4  
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Di.zea.1140-Dd1591\_0523-YP\_003002884.1-36H-COG6  
Di.zea.1140-Dd1591\_1594-YP\_003003927.1-36H-COG7  
Di.zea.1140-Dd1591\_3111-YP\_003005412.1-36H-COG8  
Di.zea.1140-Dd1591\_0772-YP\_003003130.1-36H-COG9  
Di.zea.1140-Dd1591\_2187-YP\_003004509.1-36H-COG12  
Di.zea.1140-Dd1591\_3613-YP\_003005900.1-36H-COG15  
Di.zea.1140-Dd1591\_4046-YP\_003006323.1-36H-COG16  
Di.zea.1140-Dd1591\_1251-YP\_003003594.1-36H-COG17  
Di.zea.1140-Dd1591\_2083-YP\_003004008.1-Uncat-COG19  
Di.zea.1140-Dd1591\_3723-YP\_003006005.1-36H-COG20  
Di.zea.1140-Dd1591\_3031-YP\_003005332.1-36H-COG21  
Di.zea.1140-Dd1591\_4048-YP\_003006325.1-36H-COG22  
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Di.zea.1140-Dd1591\_1776-YP\_003004107.1-36H-COG35  
Di.zea.1140-Dd1591\_0394-YP\_003002763.1-36H-COG36  
Di.zea.1140-Dd1591\_4047-YP\_003006324.1-36H-COG37  
Di.zea.1140-Dd1591\_4053-YP\_003006330.1-36H-COG38  
Di.zea.1140-Dd1591\_2409-YP\_003004729.1-36H-COG46  
Di.zea.1140-Dd1591\_2271-YP\_003004592.1-36H-COG64

## **Edwardsiella ictaluri** 93-146

Ed.ict.1187-NT01E1\_1461-YP\_002932882.2-36H-COG1  
Ed.ict.1187-NT01E1\_1462-YP\_002932883.1-36H-COG1  
Ed.ict.1187-NT01E1\_3742-YP\_002935104.1-36H-COG1  
Ed.ict.1187-NT01E1\_2801-YP\_002934203.1-36H-COG1  
Ed.ict.1187-NT01E1\_3772-YP\_002935132.1-36H-COG5  
Ed.ict.1187-NT01E1\_1971-YP\_002933382.1-36H-COG8  
Ed.ict.1187-NT01E1\_3245-YP\_002934621.1-36H-COG23  
Ed.ict.1187-NT01E1\_2581-YP\_002933985.1-36H-COG48  
Ed.ict.1187-NT01E1\_0250-YP\_002931728.1-Uncat-COG83

## **Edwardsiella tarda** FL6-60

Ed.tar.1771-ETAF\_1249-YP\_005698855.1-36H-COG1  
Ed.tar.1771-ETAF\_1250-YP\_005698856.1-36H-COG1  
Ed.tar.1771-ETAF\_2264-YP\_005698859.1-36H-COG1  
Ed.tar.1771-ETAF\_3053-YP\_005700648.1-36H-COG1  
Ed.tar.1771-ETAF\_3081-YP\_005700676.1-36H-COG5  
Ed.tar.1771-ETAF\_1569-YP\_005699169.1-36H-COG8  
Ed.tar.1771-ETAF\_2605-YP\_005700199.1-36H-COG23  
Ed.tar.1771-ETAF\_2068-YP\_005699666.1-36H-COG44

## **Enterobacter aerogenes** KCTC 2190

En.aer.1436-EAE\_15535-YP\_004593297.1-36H-COG1  
En.aer.1436-EAE\_15540-YP\_004593298.1-36H-COG1

## **Enterobacter asburiae** LF7a

En.asb.1498-Entas\_0547-YP\_004827084.1-36H-COG1  
En.asb.1498-Entas\_2590-YP\_004829104.1-36H-COG1  
En.asb.1498-Entas\_3672-YP\_004830170.1-36H-COG1  
En.asb.1498-Entas\_2591-YP\_004829105.1-36H-COG1  
En.asb.1498-Entas\_1879-YP\_004828403.1-36H-COG1  
En.asb.1498-Entas\_0424-YP\_004829663.1-36H-COG1  
En.asb.1498-Entas\_3753-YP\_004830248.1-36H-COG2  
En.asb.1498-Entas\_2287-YP\_004828805.1-36H-COG2  
En.asb.1498-Entas\_4509-YP\_004821569.1-36H-COG2  
En.asb.1498-Entas\_3754-YP\_004830249.1-36H-COG3  
En.asb.1498-Entas\_2280-YP\_004828798.1-36H-COG3  
En.asb.1498-Entas\_0444-YP\_004826983.1-36H-COG5  
En.asb.1498-Entas\_2095-YP\_004828614.1-36H-COG6  
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En.asb.1498-Entas\_1655-YP\_004828181.1-36H-COG10  
En.asb.1498-Entas\_2185-YP\_004828704.1-36H-COG14  
En.asb.1498-Entas\_2326-YP\_004828842.1-36H-COG18  
En.asb.1498-Entas\_0438-YP\_004826977.1-36H-COG30  
En.asb.1498-Entas\_2153-YP\_004828672.1-Uncat-COG98

## **Enterobacter cloacae** EcWSU1

En.clo.1544-EcWSU1\_02810-YP\_004952663.1-36H-COG1  
En.clo.1544-EcWSU1\_01962-YP\_004951821.1-36H-COG1  
En.clo.1544-EcWSU1\_00403-YP\_004950264.1-36H-COG1  
En.clo.1544-EcWSU1\_02811-YP\_004952664.1-36H-COG1  
En.clo.1544-EcWSU1\_00560-YP\_004950421.1-36H-COG1  
En.clo.1544-EcWSU1\_03786-YP\_004953635.1-36H-COG1  
En.clo.1544-EcWSU1\_03886-YP\_004953735.1-36H-COG2  
En.clo.1544-EcWSU1\_03888-YP\_004953737.1-36H-COG2  
En.clo.1544-EcWSU1\_02381-YP\_004952237.1-36H-COG3  
En.clo.1544-EcWSU1\_00432-YP\_004950293.1-36H-COG5  
En.clo.1544-EcWSU1\_02120-YP\_004951978.1-36H-COG6  
En.clo.1544-EcWSU1\_02626-YP\_004952481.1-36H-COG8  
En.clo.1544-EcWSU1\_00383-YP\_004950244.1-36H-COG9  
En.clo.1544-EcWSU1\_01715-YP\_004951575.1-36H-COG10  
En.clo.1544-EcWSU1\_02281-YP\_004952137.1-36H-COG14  
En.clo.1544-EcWSU1\_02447-YP\_004952303.1-36H-COG18  
En.clo.1544-EcWSU1\_02183-YP\_004952040.1-Uncat-COG65

## **Enterobacter** sp. 638

En.638.865-Ent638\_0513-YP\_001175251.1-36H-COG1  
En.638.865-Ent638\_2456-YP\_001177176.1-36H-COG1  
En.638.865-Ent638\_3407-YP\_001178118.1-36H-COG1  
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En.638.865-Ent638\_2457-YP\_001177177.1-36H-COG1  
En.638.865-Ent638\_0380-YP\_001175119.1-36H-COG1  
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En.638.865-Ent638\_2100-YP\_001176826.1-36H-COG2  
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En.638.865-Ent638\_0416-YP\_001175155.1-36H-COG5  
En.638.865-Ent638\_1961-YP\_001176688.1-36H-COG6  
En.638.865-Ent638\_2328-YP\_001177048.1-36H-COG8  
En.638.865-Ent638\_0366-YP\_001175105.1-36H-COG9  
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En.638.865-Ent638\_2139-YP\_001176865.1-36H-COG14  
En.638.865-Ent638\_2145-YP\_001176871.1-36H-COG18

## **Enterobacteriaceae bacterium** strain F17

En.bac.2261-D782\_3913-YP\_007342002.1-36H-COG1

En.bac.2261-D782\_1749-YP\_007339930.1--36H-COG1  
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En.bac.2261-D782\_0608-YP\_007338849.1--36H-COG3  
En.bac.2261-D782\_2307-YP\_007340074.1--36H-COG6  
En.bac.2261-D782\_0686-YP\_007338925.1--36H-COG40

**Erwinia billingiae Eb661**

Er.bil.197-Ebc\_25350-YP\_003741913.1--36H-COG1  
Er.bil.197-Ebc\_20190-YP\_003741400.1--36H-COG1  
Er.bil.197-Ebc\_25340-YP\_003741912.1--36H-COG1  
Er.bil.197-Ebc\_37780-YP\_003743156.1--36H-COG1  
Er.bil.197-Ebc\_25360-YP\_003741914.1--36H-COG1  
Er.bil.197-Ebc\_38940-YP\_003743272.1--36H-COG2  
Er.bil.197-Ebc\_03660-YP\_003739757.1--36H-COG3  
Er.bil.197-Ebc\_45290-YP\_003743907.1--36H-COG4  
Er.bil.197-Ebc\_44400-YP\_003743818.1--36H-COG4  
Er.bil.197-Ebc\_pEb17200840-YP\_003739255.1--36H-COG4  
Er.bil.197-Ebc\_04790-YP\_003739870.1--36H-COG5  
Er.bil.197-Ebc\_26700-YP\_003742048.1--36H-COG6  
Er.bil.197-Ebc\_pEb17200500-YP\_003739221.1--36H-COG7  
Er.bil.197-Ebc\_12020-YP\_003740585.1--36H-COG7  
Er.bil.197-Ebc\_04620-YP\_003739853.1--36H-COG9  
Er.bil.197-Ebc\_13510-YP\_003740733.1--36H-COG10  
Er.bil.197-Ebc\_21000-YP\_003741481.1--24H-COG11  
Er.bil.197-Ebc\_21960-YP\_003741574.1--24H-COG11  
Er.bil.197-Ebc\_13800-YP\_003740762.1--36H-COG13  
Er.bil.197-Ebc\_32340-YP\_003742612.1--36H-COG13  
Er.bil.197-Ebc\_17630-YP\_003741145.1--36H-COG14  
Er.bil.197-Ebc\_43160-YP\_003743691.1--Uncat-COG19  
Er.bil.197-Ebc\_23260-YP\_003741704.1--36H-COG29  
Er.bil.197-Ebc\_pEb17200750-YP\_003739246.1--24H-COG31  
Er.bil.197-Ebc\_pEb17200920-YP\_003739263.1--36H-COG42  
Er.bil.197-Ebc\_pEb17200530-YP\_003739224.1--36H-COG45  
Er.bil.197-Ebc\_pEb17201160-YP\_003739287.1--Uncat-COG49  
Er.bil.197-Ebc\_22510-YP\_003741623.1--36H-COG59  
Er.bil.197-Ebc\_pEb10200250-YP\_003739082.1--36H-COG90

**Erwinia tasmaniensis Et1/99**

Er.tas.1011-ETA\_14650-YP\_001907404.1--36H-COG1  
Er.tas.1011-ETA\_14670-YP\_001907406.1--36H-COG1  
Er.tas.1011-ETA\_peT460340-YP\_001905943.1--36H-COG1  
Er.tas.1011-ETA\_14640-YP\_001907403.1--36H-COG1  
Er.tas.1011-ETA\_16910-YP\_001907630.1--36H-COG1  
Er.tas.1011-ETA\_14660-YP\_001907405.1--36H-COG1  
Er.tas.1011-ETA\_30660-YP\_001908981.1--36H-COG3  
Er.tas.1011-ETA\_29380-YP\_001908853.1--36H-COG5  
Er.tas.1011-ETA\_29570-YP\_001908872.1--36H-COG9  
Er.tas.1011-ETA\_14120-YP\_001907351.1--Uncat-COG12  
Er.tas.1011-ETA\_33570-YP\_001909263.1--36H-COG28  
Er.tas.1011-ETA\_21980-YP\_001908122.1--36H-COG84  
Er.tas.1011-ETA\_07660-YP\_001906710.1--Uncat-COG96

**Escherichia coli str. K-12 substr. W3110**

Es.col.1836-Y75\_p4240-YP\_492486.1--36H-COG1  
Es.col.1836-Y75\_p1861-YP\_490147.1--36H-COG1  
Es.col.1836-Y75\_p1862-YP\_490148.1--36H-COG1  
Es.col.1836-Y75\_p2997-YP\_491263.1--36H-COG3  
Es.col.1836-Y75\_p1397-YP\_489687.1--36H-COG6

**Escherichia fergusonii ATCC 35469**

Es.fer.1173-EFER\_3055-YP\_002384154.1--36H-COG1  
Es.fer.1173-EFER\_3024-YP\_002384123.1--36H-COG3  
Es.fer.1173-EFER\_1141-YP\_002382303.1--36H-COG47

**Morganella morganii subsp. morganii KT**

Mo.mor.2189-MU9\_1762-YP\_007505181.1--36H-COG1  
Mo.mor.2189-MU9\_1763-YP\_007505182.1--36H-COG1  
Mo.mor.2189-MU9\_1596-YP\_007505015.1--36H-COG1  
Mo.mor.2189-MU9\_3389-YP\_007506806.1--36H-COG2  
Mo.mor.2189-MU9\_702-YP\_007504121.1--36H-COG2  
Mo.mor.2189-MU9\_479-YP\_007503898.1--36H-COG3  
Mo.mor.2189-MU9\_449-YP\_007503868.1--36H-COG13  
Mo.mor.2189-MU9\_478-YP\_007503897.1--36H-COG18  
Mo.mor.2189-MU9\_4-YP\_007503423.1--Uncat-COG25

**Pantoea ananatis AJ13355**

Pa.ana.1905-PAJ\_1540-YP\_005934416.1--36H-COG1  
Pa.ana.1905-PAJ\_1316-YP\_005934192.1--36H-COG1  
Pa.ana.1905-PAJ\_3534-YP\_005934609.1--36H-COG1  
Pa.ana.1905-PAJ\_1541-YP\_005934417.1--36H-COG1  
Pa.ana.1905-PAJ\_0915-YP\_005933791.1--36H-COG2  
Pa.ana.1905-PAJ\_3064-YP\_005935940.1--36H-COG2  
Pa.ana.1905-PAJ\_2666-YP\_005935542.1--36H-COG2  
Pa.ana.1905-PAJ\_3456-YP\_005936331.1--36H-COG3  
Pa.ana.1905-PAJ\_1980-YP\_005934856.1--36H-COG4  
Pa.ana.1905-PAJ\_0511-YP\_005933387.1--36H-COG4  
Pa.ana.1905-PAJ\_2734-YP\_005935610.1--36H-COG5  
Pa.ana.1905-PAJ\_1621-YP\_005934497.1--36H-COG6  
Pa.ana.1905-PAJ\_1032-YP\_005933908.1--36H-COG7  
Pa.ana.1905-PAJ\_3633-YP\_005936508.1--36H-COG7  
Pa.ana.1905-PAJ\_p0016-YP\_005940982.1--36H-COG7  
Pa.ana.1905-PAJ\_2753-YP\_005935629.1--36H-COG9

Pa.ana.1905-PAJ\_2439-YP\_005935315.1--36H-COG10  
Pa.ana.1905-PAJ\_3217-YP\_005936093.1--24H-COG11  
Pa.ana.1905-PAJ\_2484-YP\_005935360.1--24H-COG11  
Pa.ana.1905-PAJ\_2483-YP\_005935359.1--24H-COG11  
Pa.ana.1905-PAJ\_1629-YP\_005934505.1--Uncat-COG12  
Pa.ana.1905-PAJ\_0570-YP\_005933464.1--36H-COG13  
Pa.ana.1905-PAJ\_3465-YP\_005936340.1--36H-COG14  
Pa.ana.1905-PAJ\_0977-YP\_005933853.1--Uncat-COG19  
Pa.ana.1905-PAJ\_1724-YP\_005934600.1--36H-COG28  
Pa.ana.1905-PAJ\_2668-YP\_005935544.1--36H-COG29  
Pa.ana.1905-PAJ\_1490-YP\_005934366.1--36H-COG39  
Pa.ana.1905-PAJ\_3487-YP\_005936362.1--36H-COG40  
Pa.ana.1905-PAJ\_2672-YP\_005935548.1--36H-COG42  
Pa.ana.1905-PAJ\_2482-YP\_005935358.1--36H-COG43  
Pa.ana.1905-PAJ\_3510-YP\_005936385.1--36H-COG50  
Pa.ana.1905-PAJ\_0100-YP\_005932976.1--36H-COG51  
Pa.ana.1905-PAJ\_0806-YP\_005933682.1--36H-COG53  
Pa.ana.1905-PAJ\_p0224-YP\_005941189.1--36H-COG60  
Pa.ana.1905-PAJ\_p0226-YP\_005941191.1--36H-COG61  
Pa.ana.1905-PAJ\_3686-YP\_005936561.1--36H-COG66  
Pa.ana.1905-PAJ\_0838-YP\_005933714.1--36H-COG67  
Pa.ana.1905-PAJ\_1495-YP\_005934371.1--36H-COG68  
Pa.ana.1905-PAJ\_1280-YP\_005934166.1--36H-COG85  
Pa.ana.1905-PAJ\_1210-YP\_005934086.1--36H-COG86  
Pa.ana.1905-PAJ\_p0193-YP\_005941189.1--36H-COG88  
Pa.ana.1905-PAJ\_p0045-YP\_005941009.1--36H-COG89

**Pantoea sp. At-9b**

Pantoe.297-Pat9b\_1606-YP\_004115479.1--36H-COG1  
Pantoe.297-Pat9b\_2001-YP\_004115477.1--36H-COG1  
Pantoe.297-Pat9b\_1273-YP\_004115150.1--36H-COG1  
Pantoe.297-Pat9b\_1605-YP\_004115478.1--36H-COG1  
Pantoe.297-Pat9b\_1604-YP\_004115477.1--36H-COG1  
Pantoe.297-Pat9b\_0851-YP\_004114731.1--36H-COG2  
Pantoe.297-Pat9b\_0341-YP\_004114223.1--36H-COG3  
Pantoe.297-Pat9b\_5879-YP\_004118591.1--36H-COG4  
Pantoe.297-Pat9b\_3525-YP\_004117371.1--36H-COG5  
Pantoe.297-Pat9b\_2403-YP\_004116261.1--36H-COG6  
Pantoe.297-Pat9b\_4649-YP\_004119174.1--36H-COG7  
Pantoe.297-Pat9b\_5016-YP\_004118863.1--36H-COG7  
Pantoe.297-Pat9b\_3153-YP\_004117006.1--36H-COG7  
Pantoe.297-Pat9b\_3547-YP\_004117393.1--36H-COG9  
Pantoe.297-Pat9b\_5671-YP\_004118383.1--36H-COG10  
Pantoe.297-Pat9b\_3317-YP\_004117167.1--24H-COG11  
Pantoe.297-Pat9b\_2415-YP\_004116273.1--36H-COG12  
Pantoe.297-Pat9b\_1197-YP\_004115075.1--36H-COG13  
Pantoe.297-Pat9b\_4325-YP\_004119444.1--36H-COG20  
Pantoe.297-Pat9b\_0591-YP\_004114472.1--36H-COG30

**Pantoea vagans C9-1**

Pa.vag.184-Pvag\_1723-YP\_003931360.1--36H-COG1  
Pa.vag.184-Pvag\_1413-YP\_003931052.1--36H-COG1  
Pa.vag.184-Pvag\_1203-YP\_003930842.1--36H-COG1  
Pa.vag.184-Pvag\_1725-YP\_003931362.1--36H-COG1  
Pa.vag.184-Pvag\_1724-YP\_003931361.1--36H-COG1  
Pa.vag.184-Pvag\_0291-YP\_003929953.1--36H-COG2  
Pa.vag.184-Pvag\_pPag30079-YP\_003729820.1--36H-COG2  
Pa.vag.184-Pvag\_3553-YP\_003933121.1--36H-COG3  
Pa.vag.184-Pvag\_1911-YP\_003931544.1--36H-COG4  
Pa.vag.184-Pvag\_pPag20206-YP\_003933542.1--36H-COG4  
Pa.vag.184-Pvag\_2761-YP\_003932369.1--36H-COG5  
Pa.vag.184-Pvag\_1800-YP\_003931435.1--36H-COG6  
Pa.vag.184-Pvag\_pPag20204-YP\_003933540.1--36H-COG7  
Pa.vag.184-Pvag\_pPag10013-YP\_003929523.1--36H-COG7  
Pa.vag.184-Pvag\_2781-YP\_003932389.1--36H-COG9  
Pa.vag.184-Pvag\_pPag30316-YP\_003730057.1--36H-COG10  
Pa.vag.184-Pvag\_2599-YP\_003932208.1--24H-COG11  
Pa.vag.184-Pvag\_0630-YP\_003930281.1--36H-COG13  
Pa.vag.184-Pvag\_1475-YP\_003931114.1--36H-COG14  
Pa.vag.184-Pvag\_pPag10026-YP\_003929536.1--Uncat-COG19  
Pa.vag.184-Pvag\_1111-YP\_003930753.1--36H-COG28  
Pa.vag.184-Pvag\_pPag10014-YP\_003929524.1--36H-COG29  
Pa.vag.184-Pvag\_1107-YP\_003930749.1--24H-COG31  
Pa.vag.184-Pvag\_pPag20061-YP\_003933397.1--36H-COG39  
Pa.vag.184-Pvag\_pPag30137-YP\_003729878.1--36H-COG62  
Pa.vag.184-Pvag\_pPag10136-YP\_003929646.1--36H-COG72  
Pa.vag.184-Pvag\_pPag30481-YP\_003730222.1--36H-COG80  
Pa.vag.184-Pvag\_pPag20120-YP\_003933456.1--Uncat-COG92  
Pa.vag.184-Pvag\_pPag30081-YP\_003729822.1--Uncat-COG95

**Pectobacterium atrosepticum SCR11043**

Pe.atr.485-ECA1691-YP\_049792.1--36H-COG1  
Pe.atr.485-ECA1332-YP\_049438.1--36H-COG1  
Pe.atr.485-ECA2712-YP\_050803.1--36H-COG1  
Pe.atr.485-ECA1281-YP\_049387.1--36H-COG1  
Pe.atr.485-ECA1509-YP\_049611.1--36H-COG1  
Pe.atr.485-ECA1774-YP\_049874.1--36H-COG2  
Pe.atr.485-ECA0183-YP\_048310.1--36H-COG2  
Pe.atr.485-ECA3642-YP\_051730.1--36H-COG2  
Pe.atr.485-ECA4334-YP\_052421.1--36H-COG2  
Pe.atr.485-ECA0182-YP\_048309.1--36H-COG2  
Pe.atr.485-ECA3579-YP\_051667.1--36H-COG3

Pe.atr.485-ECA2002-YP\_050096.1--36H-COG3  
Pe.atr.485-ECA2001-YP\_050095.1--36H-COG3  
Pe.atr.485-ECA0091-YP\_048219.1--36H-COG4  
Pe.atr.485-ECA2579-YP\_050670.1--36H-COG4  
Pe.atr.485-ECA0080-YP\_048208.1--36H-COG4  
Pe.atr.485-ECA3592-YP\_051680.1--36H-COG5  
Pe.atr.485-ECA3624-YP\_051712.1--36H-COG5  
Pe.atr.485-ECA1683-YP\_049784.1--36H-COG6  
Pe.atr.485-ECA3902-YP\_051990.1--36H-COG6  
Pe.atr.485-ECA3245-YP\_051334.1--36H-COG7  
Pe.atr.485-ECA1105-YP\_049211.1--36H-COG8  
Pe.atr.485-ECA3615-YP\_051703.1--36H-COG9  
Pe.atr.485-ECA0436-YP\_048554.1--36H-COG15  
Pe.atr.485-ECA4332-YP\_052419.1--36H-COG16  
Pe.atr.485-ECA4120-YP\_052207.1--36H-COG16  
Pe.atr.485-ECA0434-YP\_048552.1--36H-COG17  
Pe.atr.485-ECA0390-YP\_048516.1--36H-COG20  
Pe.atr.485-ECA2530-YP\_050621.1--36H-COG21  
Pe.atr.485-ECA4333-YP\_052420.1--36H-COG22  
Pe.atr.485-ECA4335-YP\_052422.1--36H-COG24  
Pe.atr.485-ECA3838-YP\_051926.1--36H-COG26  
Pe.atr.485-ECA2061-YP\_050156.1--36H-COG27  
Pe.atr.485-ECA2800-YP\_050671.1--36H-COG33  
Pe.atr.485-ECA2226-YP\_050320.1--36H-COG63  
Pe.atr.485-ECA2317-YP\_050412.1--36H-COG94

**Pectobacterium carotovorum subsp. carotovorum PC1**

Pe.car.1139-PC1\_2609-YP\_003018175.1--36H-COG1  
Pe.car.1139-PC1\_1108-YP\_003016792.1--36H-COG1  
Pe.car.1139-PC1\_1259-YP\_003016743.1--36H-COG1  
Pe.car.1139-PC1\_1669-YP\_003017246.1--36H-COG1  
Pe.car.1139-PC1\_1384-YP\_003016966.1--36H-COG1  
Pe.car.1139-PC1\_2526-YP\_003018093.1--36H-COG2  
Pe.car.1139-PC1\_3443-YP\_003018995.1--36H-COG2  
Pe.car.1139-PC1\_4071-YP\_003019622.1--36H-COG2  
Pe.car.1139-PC1\_1417-YP\_003016999.1--36H-COG2  
Pe.car.1139-PC1\_4072-YP\_003019623.1--36H-COG2  
Pe.car.1139-PC1\_3464-YP\_003019016.1--36H-COG2  
Pe.car.1139-PC1\_0111-YP\_003015709.1--36H-COG2  
Pe.car.1139-PC1\_3399-YP\_003018951.1--36H-COG3  
Pe.car.1139-PC1\_2292-YP\_003017866.1--36H-COG3  
Pe.car.1139-PC1\_2293-YP\_003017867.1--36H-COG3  
Pe.car.1139-PC1\_4161-YP\_003019711.1--36H-COG4  
Pe.car.1139-PC1\_4172-YP\_003019722.1--36H-COG4  
Pe.car.1139-PC1\_3412-YP\_003018964.1--36H-COG5  
Pe.car.1139-PC1\_3447-YP\_003018999.1--36H-COG5  
Pe.car.1139-PC1\_2647-YP\_003018183.1--36H-COG6  
Pe.car.1139-PC1\_3679-YP\_003019230.1--36H-COG6  
Pe.car.1139-PC1\_3039-YP\_003018598.1--36H-COG7  
Pe.car.1139-PC1\_1003-YP\_003016588.1--36H-COG8  
Pe.car.1139-PC1\_3437-YP\_003018989.1--36H-COG9  
Pe.car.1139-PC1\_2086-YP\_003017662.1--36H-COG10  
Pe.car.1139-PC1\_0007-YP\_003015606.1--36H-COG10  
Pe.car.1139-PC1\_0416-YP\_003016008.1--36H-COG15  
Pe.car.1139-PC1\_0113-YP\_003015711.1--36H-COG16  
Pe.car.1139-PC1\_3910-YP\_003019461.1--36H-COG16  
Pe.car.1139-PC1\_2613-YP\_003016005.1--36H-COG17  
Pe.car.1139-PC1\_0380-YP\_003015974.1--36H-COG20  
Pe.car.1139-PC1\_1797-YP\_003017374.1--36H-COG21  
Pe.car.1139-PC1\_0112-YP\_003015710.1--36H-COG22  
Pe.car.1139-PC1\_0110-YP\_003015708.1--36H-COG24  
Pe.car.1139-PC1\_3614-YP\_003019165.1--36H-COG26  
Pe.car.1139-PC1\_2223-YP\_003017798.1--36H-COG27  
Pe.car.1139-PC1\_1293-YP\_003017570.1--36H-COG32

**Pectobacterium sp. SCC3193**

Pectob.2320-W55\_1768-YP\_006282731.1--36H-COG1  
Pectob.2320-W55\_3114-YP\_006284066.1--36H-COG1  
Pectob.2320-W55\_1886-YP\_006282848.1--36H-COG1  
Pectob.2320-W55\_1696-YP\_006282659.1--36H-COG1  
Pectob.2320-W55\_3170-YP\_006284116.1--36H-COG1  
Pectob.2320-W55\_2813-YP\_006283770.1--36H-COG2  
Pectob.2320-W55\_3736-YP\_006284671.1--36H-COG2  
Pectob.2320-W55\_4505-YP\_006285423.1--36H-COG2  
Pectob.2320-W55\_1733-YP\_006282696.1--36H-COG2  
Pectob.2320-W55\_4506-YP\_006285424.1--36H-COG2  
Pectob.2320-W55\_0106-YP\_006281117.1--36H-COG2  
Pectob.2320-W55\_3753-YP\_006284688.1--36H-COG2  
Pectob.2320-W55\_3696-YP\_006284631.1--36H-COG3  
Pectob.2320-W55\_2564-YP\_006283524.1--36H-COG3  
Pectob.2320-W55\_4621-YP\_006285539.1--36H-COG4  
Pectob.2320-W55\_1965-YP\_006282927.1--36H-COG4  
Pectob.2320-W55\_4632-YP\_006285550.1--36H-COG4  
Pectob.2320-W55\_3740-YP\_006284675.1--36H-COG5  
Pectob.2320-W55\_3708-YP\_006284643.1--36H-COG5  
Pectob.2320-W55\_1760-YP\_006282723.1--36H-COG6  
Pectob.2320-W55\_4020-YP\_006284955.1--36H-COG6  
Pectob.2320-W55\_1146-YP\_006282119.1--36H-COG6  
Pectob.2320-W55\_3303-YP\_006284249.1--36H-COG8  
Pectob.2320-W55\_3731-YP\_006284663.1--36H-COG9  
Pectob.2320-W55\_2351-YP\_006283311.1--36H-COG10  
Pectob.2320-W55\_0006-YP\_006281017.1--36H-COG10

Pectob.2320-W55\_0520-YP\_006281518.1--36H-COG15  
Pectob.2320-W55\_4243-YP\_006281517.1--36H-COG16  
Pectob.2320-W55\_0518-YP\_006281516.1--36H-COG17  
Pectob.2320-W55\_0443-YP\_006281442.1--36H-COG20  
Pectob.2320-W55\_2016-YP\_006282978.1--36H-COG21  
Pectob.2320-W55\_0107-YP\_006281118.1--36H-COG22  
Pectob.2320-W55\_0105-YP\_006281116.1--36H-COG24  
Pectob.2320-W55\_3942-YP\_006284877.1--36H-COG26  
Pectob.2320-W55\_2511-YP\_006283471.1--36H-COG27  
Pectob.2320-W55\_2238-YP\_006283198.1--36H-COG32  
Pectob.2320-W55\_1964-YP\_006282926.1--36H-COG33  
Pectob.2320-W55\_0108-YP\_006281119.1--36H-COG57

#### Photorhabdus asymbiotica

Ph.asy.1114-PAU\_02685-YP\_003041519.1--36H-COG1  
Ph.asy.1114-PAU\_02684-YP\_003041518.1--36H-COG1

#### Photorhabdus luminescens subsp. laumondii TTO1

Ph.lum.1262-plu1853-NP\_929126.1--36H-COG1  
Ph.lum.1262-plu1854-NP\_929127.1--36H-COG1

#### Proteus mirabilis HI4320

Pr.mir.1265-PMI1666-YP\_002151397.1--36H-COG1  
Pr.mir.1265-PMI1665-YP\_002151396.1--36H-COG1  
Pr.mir.1265-PMI2808-YP\_002152509.1--36H-COG1  
Pr.mir.1265-PMI2809-YP\_002152510.1--36H-COG1  
Pr.mir.1265-PMI2813-YP\_002152514.1--36H-COG3  
Pr.mir.1265-PMI2381-YP\_002152099.1--36H-COG58  
Pr.mir.1265-PMI1180-YP\_002150913.1--36H-COG70  
Pr.mir.1265-PMI2380-YP\_002152098.1--36H-COG76  
Pr.mir.1265-PMI2671-YP\_002152372.1--Uncat-COG82

#### Providencia stuartii MRSN 2154

Pr.stu.1965-S70\_18135-YP\_006218124.1--36H-COG1  
Pr.stu.1965-S70\_18140-YP\_006218125.1--36H-COG1  
Pr.stu.1965-S70\_05790-YP\_006215722.1--36H-COG2  
Pr.stu.1965-S70\_14535-YP\_006217426.1--36H-COG3  
Pr.stu.1965-S70\_01415-YP\_006214870.1--36H-COG87

#### Rahnella aquatilis HX2

Ra.aqu.1678-Q75\_08960-YP\_005401597.1--36H-COG1  
Ra.aqu.1678-Q75\_16025-YP\_005402985.1--36H-COG1  
Ra.aqu.1678-Q75\_08965-YP\_005401598.1--36H-COG1  
Ra.aqu.1678-Q75\_14450-YP\_005402672.1--36H-COG1  
Ra.aqu.1678-Q75\_24891-YP\_005419232.1--36H-COG2  
Ra.aqu.1678-Q75\_15665-YP\_005402913.1--36H-COG2  
Ra.aqu.1678-Q75\_18035-YP\_005403387.1--36H-COG2  
Ra.aqu.1678-Q75\_23326-YP\_005418927.1--36H-COG3  
Ra.aqu.1678-Q75\_00195-YP\_005399878.1--36H-COG4  
Ra.aqu.1678-Q75\_13620-YP\_005402506.1--36H-COG4  
Ra.aqu.1678-Q75\_02285-YP\_005400289.1--36H-COG5  
Ra.aqu.1678-Q75\_09815-YP\_005401764.1--36H-COG6  
Ra.aqu.1678-Q75\_00910-YP\_005400016.1--36H-COG7  
Ra.aqu.1678-Q75\_04670-YP\_005400757.1--36H-COG8  
Ra.aqu.1678-Q75\_02185-YP\_005400269.1--36H-COG9  
Ra.aqu.1678-Q75\_06520-YP\_005401115.1--24H-COG11  
Ra.aqu.1678-Q75\_07590-YP\_005401329.1--36H-COG12  
Ra.aqu.1678-Q75\_22515-YP\_005404275.1--36H-COG13  
Ra.aqu.1678-Q75\_23331-YP\_005418928.1--36H-COG14  
Ra.aqu.1678-Q75\_20535-YP\_005403883.1--36H-COG15

#### Rahnella sp. Y9602

Rahnel.1320-Rahaq\_1830-YP\_004212575.1--36H-COG1  
Rahnel.1320-Rahaq\_3177-YP\_004213898.1--36H-COG1  
Rahnel.1320-Rahaq\_1831-YP\_004212576.1--36H-COG1  
Rahnel.1320-Rahaq\_2866-YP\_004213595.1--36H-COG1  
Rahnel.1320-Rahaq\_4869-YP\_004215574.1--36H-COG2  
Rahnel.1320-Rahaq\_3107-YP\_004213828.1--36H-COG2  
Rahnel.1320-Rahaq\_3579-YP\_004214298.1--36H-COG2  
Rahnel.1320-Rahaq\_4561-YP\_004215269.1--36H-COG3  
Rahnel.1320-Rahaq\_0041-YP\_004210801.1--36H-COG4  
Rahnel.1320-Rahaq\_2735-YP\_004213465.1--36H-COG4  
Rahnel.1320-Rahaq\_0458-YP\_004211214.1--36H-COG5  
Rahnel.1320-Rahaq\_1930-YP\_004212674.1--36H-COG6  
Rahnel.1320-Rahaq\_0181-YP\_004210938.1--36H-COG7  
Rahnel.1320-Rahaq\_0984-YP\_004211735.1--36H-COG8  
Rahnel.1320-Rahaq\_0438-YP\_004211194.1--36H-COG9  
Rahnel.1320-Rahaq\_1352-YP\_004212102.1--24H-COG11  
Rahnel.1320-Rahaq\_1570-YP\_004212319.1--36H-COG12  
Rahnel.1320-Rahaq\_4432-YP\_004215145.1--36H-COG13  
Rahnel.1320-Rahaq\_4562-YP\_004215270.1--36H-COG14  
Rahnel.1320-Rahaq\_4041-YP\_004214756.1--36H-COG15

#### Salmonella bongori NCTC 12419

Sa.bon.1474-SBG\_3944-YP\_004732724.1--36H-COG1  
Sa.bon.1474-SBG\_2750-YP\_004731563.1--36H-COG1  
Sa.bon.1474-SBG\_3170-YP\_004731982.1--36H-COG1  
Sa.bon.1474-SBG\_1755-YP\_004730609.1--36H-COG1  
Sa.bon.1474-SBG\_2851-YP\_004731664.1--36H-COG2  
Sa.bon.1474-SBG\_2852-YP\_004731665.1--36H-COG3  
Sa.bon.1474-SBG\_1454-YP\_004730321.1--36H-COG6  
Sa.bon.1474-SBG\_1497-YP\_004730358.1--36H-COG18

Sa.bon.1474-SBG\_2737-YP\_004731551.1--Uncat-COG25

#### Salmonella enterica subsp. enterica serovar Typhi str. CT18

Sa.ent.404-STY2128-NP\_456485.1--36H-COG1  
Sa.ent.404-STY4234-NP\_458344.1--36H-COG1  
Sa.ent.404-STY3394-NP\_457606.1--36H-COG2  
Sa.ent.404-STY3395-NP\_457607.1--36H-COG3  
Sa.ent.404-STY1408-NP\_455847.1--36H-COG18  
Sa.ent.404-STY3309-NP\_457533.1--Uncat-COG25

#### Salmonella enterica subsp. enterica serovar Typhimurium str. LT2

Sa.ent.407-STM4533-NP\_463392.1--36H-COG1  
Sa.ent.407-STM3152-NP\_462067.1--36H-COG1  
Sa.ent.407-STM3577-NP\_462478.1--36H-COG1  
Sa.ent.407-STM1919-NP\_460876.1--36H-COG1  
Sa.ent.407-STM3216-NP\_462130.1--36H-COG2  
Sa.ent.407-STM3217-NP\_462131.1--36H-COG3  
Sa.ent.407-STM1626-NP\_460585.1--36H-COG6  
Sa.ent.407-STM1657-NP\_460616.1--36H-COG18  
Sa.ent.407-STM3138-NP\_462053.1--Uncat-COG25

#### Serratia marcescens FGI94

Se.mar.2260-D781\_2759-YP\_007345195.1--36H-COG1  
Se.mar.2260-D781\_2758-YP\_007345194.1--36H-COG1  
Se.mar.2260-D781\_0032-YP\_007342620.1--36H-COG4  
Se.mar.2260-D781\_0365-YP\_007342916.1--36H-COG5  
Se.mar.2260-D781\_1404-YP\_007343896.1--24H-COG11  
Se.mar.2260-D781\_1283-YP\_007343780.1--36H-COG17

#### Serratia plymuthica AS9

Se.ply.1407-SerAS9\_3072-YP\_004506452.1--36H-COG1  
Se.ply.1407-SerAS9\_3071-YP\_004506451.1--36H-COG1  
Se.ply.1407-SerAS9\_0039-YP\_004503465.1--36H-COG4  
Se.ply.1407-SerAS9\_0403-YP\_004503820.1--36H-COG5

#### Serratia proteamaculans 568

Se.pro.864-Spro\_2983-YP\_001479212.1--36H-COG1  
Se.pro.864-Spro\_2982-YP\_001479211.1--36H-COG1  
Se.pro.864-Spro\_1415-YP\_001477647.1--36H-COG1  
Se.pro.864-Spro\_0080-YP\_001476318.1--36H-COG4  
Se.pro.864-Spro\_0463-YP\_001476699.1--36H-COG5  
Se.pro.864-Spro\_1472-YP\_001477704.1--24H-COG11

#### Serratia sp. AS12

Serrat.1408-SerAS12\_3073-YP\_004501499.1--36H-COG1  
Serrat.1408-SerAS12\_3072-YP\_004501498.1--36H-COG1  
Serrat.1408-SerAS12\_0039-YP\_004498513.1--36H-COG4  
Serrat.1408-SerAS12\_0403-YP\_004498868.1--36H-COG5

#### Serratia sp. AS13

Serrat.1901-SerAS13\_3075-YP\_006025914.1--36H-COG1  
Serrat.1901-SerAS13\_3074-YP\_006025913.1--36H-COG1  
Serrat.1901-SerAS13\_0039-YP\_006022928.1--36H-COG4  
Serrat.1901-SerAS13\_0403-YP\_006023283.1--36H-COG5

#### Xenorhabdus bovienii SS-2004

Xe.bov.105-XBJ1\_1923-YP\_003467827.1--36H-COG1  
Xe.bov.105-XBJ1\_1924-YP\_003467828.1--36H-COG1

#### Xenorhabdus nematophila ATCC 19061

Xe.nem.162-XNC1\_1620-YP\_003711881.1--36H-COG1  
Xe.nem.162-XNC1\_1619-YP\_003711880.1--36H-COG1

#### Yersinia enterocolitica subsp. enterocolitica 8081

Ye.ent.378-YE2575-YP\_001006778.1--36H-COG1  
Ye.ent.378-YE2573-YP\_001006777.1--36H-COG1  
Ye.ent.378-YE2971-YP\_001007160.1--36H-COG1  
Ye.ent.378-YE1731-YP\_001006015.1--36H-COG3  
Ye.ent.378-YE4139-YP\_001008275.1--36H-COG4  
Ye.ent.378-YE0409-YP\_001004781.1--36H-COG5  
Ye.ent.378-YE2588-YP\_001006789.1--36H-COG6  
Ye.ent.378-YE1405-YP\_001005717.1--36H-COG8  
Ye.ent.378-YE3338-YP\_001007509.1--36H-COG12  
Ye.ent.378-YE4183-YP\_001008317.1--36H-COG13  
Ye.ent.378-YE3615-YP\_001007773.1--36H-COG69  
Ye.ent.378-YE2848-YP\_001007037.1--24H-COG71

#### Yersinia pestis Z176003

Ye.pes.133-YPZ3\_2024-YP\_003568196.1--36H-COG1  
Ye.pes.133-YPZ3\_2023-YP\_003568195.1--36H-COG1  
Ye.pes.133-YPZ3\_2049-YP\_003568221.1--36H-COG3  
Ye.pes.133-YPZ3\_3484-YP\_003569655.1--36H-COG4  
Ye.pes.133-YPZ3\_1131-YP\_003567303.1--36H-COG8  
Ye.pes.133-YPZ3\_2157-YP\_003568329.1--24H-COG11  
Ye.pes.133-YPZ3\_0903-YP\_003567075.1--36H-COG12  
Ye.pes.133-YPZ3\_2040-YP\_003568212.1--Uncat-COG54  
Ye.pes.133-YPZ3\_2039-YP\_003568211.1--36H-COG75

#### Yersinia pseudotuberculosis IP 32953

Ye.pse.585-YPTB2401-YP\_070915.1--36H-COG1  
Ye.pse.585-YPTB2400-YP\_070914.1--36H-COG1

Ye.pse.585-YPTB2424-YP\_070937.1--36H-COG3  
Ye.pse.585-YPTB3924-YP\_072400.1--36H-COG4  
Ye.pse.585-YPTB2412-YP\_070925.1--36H-COG6  
Ye.pse.585-YPTB1265-YP\_069800.1--36H-COG8  
Ye.pse.585-YPTB2551-YP\_071061.1--24H-COG11  
Ye.pse.585-YPTB3051-YP\_071556.1--36H-COG12