

Figure 1

```

EL11_strain_JCP8017A      MSKRGIDVSVWQGDIDFNAVKASGVFEFVIRAGYGIGHKDKWFEQNYRKAKTGLDVGAY 60
EL3_strain_Gv18-4        MSKKGIDVSVWQGDIDFNSVKASGVFEFVIRAGYGIGHKDKWFEENYRKAKTAGLDVGSY 60
EL10_strain_G30-4        MSKRGIDVSVWQGDIDFNAVKASGVFEFVIRAGYGIGHKDKWFEENYRKAKTAGLDVAG 60
EL12_strain_3549624_non-prophage MSKKGIDVSVWQGDIDFNAVKASGVFEFVIRAGYGIGHKDKWFEENYRKAKTAGLDVGSY 60
EL8_strain_JCP7719       MSKKGIDVSEWQGDIDFNAVKASGVFEFVIRAGYGIGCKDKWFEQNYRKAKTAGLDVAG 60
EL5_strain_JCP7276       MSKKGIDVSEWQGDIDFNAVKASGVFEFVIRAGYGIGCKDKWFEQNYRKAKTAGLDVAG 60
EL7_strain_AMD           MSKKGIDVSEWQGDIDFNAVKASGVFEFVIRAGYGIGCKDKWFEQNYRKAKTAGLDVAG 60
EL4_strain_Gv5-1         MSKKGIDVSEWQGDIDFNAVKASGVFEFVIRAGYGIGCKDKWFEQNYRKAKTCGLDVAG 60
EL6_strain_1400E_frameshift MSKKGIDVSVWQGDIDFNAVKASGVFEFVIRAGYGIGCKDKWFEQNYRKAKTCGLDVAG 60
EL1_strain_HMP9231       MSKKGIDVSEWQGDIDFNAVKASGVFEFVIRAGYGIGCKDKWFEQNYRKAKTAGLDVAG 60
EL9_strain_0288E_incomplete_contig MSKKGIDVSEWQGDIDFNAVKASGVFEFVIRAGYGIGCKDKWFEQNYRKAKTCGLDVAG 60
EL2_strain_Gv18-4        MSKRGIDVSEWQGDIDFNAVKASGVFEFVIRAGYGIGCKDKWFEQNYRKAKTCGLDVAG 60
EL13_strain_Gv37_1       MSKKGIDVSVWQGDIDFNAVKASGVFEFVIRAGYGIECKDKWFEQNYRKAKTAGLDVAG 60
EL14_strain_Gv37_2       MSKKGIDVSVWQGDIDFNAVKASGVFEFVIRAGYGIGCKDKWFEQNYRKAKTCGLDVAG 60
***:***** *****:*****:***** *****:*****:*****

EL11_strain_JCP8017A      WYSYASSAGEAAEEAQSCVNILSGKSFEYPPVYFDLEEKSQLNRGRDFCDSLITSFCNKLE 120
WYSYASSAGEASEEAQSCVNILSGKSFEYPIYFDLEEKSQLNRGRDFCDSLITSFCNKLE 120
EL3_strain_Gv18-4        WYSYASSAGEASEEAQSCVNILSGKSFEYPPVYFDLEEKSQLNRGRDFCDSLITSFCNKLE 120
EL10_strain_G30-4        WYSYASSAGEVALEEAQSCVNILSGKSFEYPPVYFDLEEKSQLNRGRDFCDSLITSFCNKLE 120
EL12_strain_3549624_non-prophage WYSYANSSSEAAEEAQSCVNMLSGKSFEYPPVYFDLEEKSQLNRGRAFCDSLITSFCNKLE 120
EL8_strain_JCP7719       WYSYANSSSEAAEEAQSCANMLSGKSFEYPPVYFDLEEKSQLNRGRAFCDSLITGFCCKLE 120
EL5_strain_JCP7276       WYSYANSSSEAAEEAQSCANMLSGKSFEYPPVYFDLEEKSQLNRGRAFCDSLITGFCCKLE 120
EL7_strain_AMD           WYSYANSAGEAAEEAQSCANMLSGKSFEYPPVYFDLEEKSQLNRGRAFCDSLITSFCCKLE 120
EL4_strain_Gv5-1         WYSYANSGFEEAAEEAQSCVNMLSGKSFEYPPVYFDLEEKSQLNRGRAFCDSLITSFCCKLE 120
EL6_strain_1400E_frameshift WYSYANSGFEEAAEEAQSCVNMLSGKSFEYPPVYFDLEEKSQLNRGRAFCDSLITSFCCKLE 120
EL1_strain_HMP9231       WYSYANSGFEEAAEEAQSLNMLSGKSFEYPPVYFDLEEKSQLNRGRAFCDSLITSFCNKLE 120
EL9_strain_0288E_incomplete_contig WYSYANSGFEEAAEEAQSCVNMLSGKSFEYPPVYFDLEEKSQLNRGRAFCDSLITSFCNKLE 120
EL2_strain_Gv18-4        WYSYANSGFEEAAEEAQSCVNMLSGKSFEYPPVYFDLEEKSQLNRGRAFCDSLITGFCNKLE 120
EL13_strain_Gv37_1       WYSYANSGFEEAAEEAQSCVNMLSGKSFEYPPVYFDLEEKSQLNRGRAFCDSLITSFCNKLE 120
EL14_strain_Gv37_2       WYSYANSGFEEAAEEAQSCVNMLSGKSFEYPPVYFDLEEKSQLNRGRAFCDSLITSFCNKLE 120
*****,*. *: **** ******:*****:***** *****:*****:*****

EL11_strain_JCP8017A      TYGYAGFYTSLSVANNLVSSHVRDYLWIAQWNTHCDYQGSYGLWQYSSSGSVGDIAG 180
ACGYAGFYTSLSVANNLVSSHVRDYLWIAQWNTHCSYQGSYGLWQYSSSGSVNGIAG 180
EL3_strain_Gv18-4        ACGYAGFYTSLSVANNLVSSHVRDYLWIAQWNTHCSYQGSYGLWQYSSSGSVNGIAG 180
EL10_strain_G30-4        ACGYAGFYTSLSVANNLVSSHVRDYLWIAQWNTHCSYQGSYGLWQYSSSGSVNGIAG 180
EL12_strain_3549624_non-prophage TYGYAGFYTSLSVANNLVSSHVRDYLWIAQWNTHCSYQGSYGLWQYSSSGSVNGIAG 180
EL8_strain_JCP7719       TYGYAGFYTSLSTANNLVSSHVRNRYALWIAQWNTHCSYQGSYGLWQYSSSGSVPGVAG 180
EL5_strain_JCP7276       ACGYAGFYTSLSTANNLVSAHVRNRYALWIAQWNTHCSYQGSYGLWQYSSSGSVPGVAG 180
EL7_strain_AMD           TYGYAGFYTSLSTANNLVSSHVRNRYALWIAQWNTHCSYQGSYGLWQYSSSGSVPGVAG 180
EL4_strain_Gv5-1         TYGYAGFYTSLSVNNLVSAHVRDYLWIAQWNTHCSYQGSYGLWQYSSSGSVPGVAG 180
EL6_strain_1400E_frameshift SCGYAGFYTSLSTANNLVSAHVRNRYALWIAQWNTHCDYQGSYGLWQYSSSGSVPGVAG 180
EL1_strain_HMP9231       ACGYAGFYTSLSTANNLVSAHVRNRYALWIAQWNTHCNQGSYGLWQYSSSGSVPGVAG 180
EL9_strain_0288E_incomplete_contig ACGYAGFYTSLSTANNLVSSHVRNRYALWIAQWNTHCDYQGSYGLWQYSSSGSVPGVAG 180
EL2_strain_Gv18-4        SCGYAGFYTSLSTANNLVSAHVRNRYALWIAQWNTHCSYQGSYGLWQYSSSGSVPGVAG 180
EL13_strain_Gv37_1       SCGYAGFYTSLSTANNLVSAHVRNRYALWIAQWNTHCDYQGSYGLWQYSSSGSVPGVAG 180
EL14_strain_Gv37_2       ACGYAGFYTSLSTANNLVSAHVRNRYALWIAQWNTHCSYQGSYGLWQYSSSGSVPGVAG 180
: *****:*****:*****:*****:*****:*****:*****

EL11_strain_JCP8017A      RVDMDYTYVDYPSVIKKNAGLNGYKNGGSYAPQTSSIDEVAREVINGDWGNGNERKNRLT 240
RVDMDYAYVDYPSVIKKNAGLNGYKNGGSYAPQTSSIDEVAREVINGDWGNGNDRKNRLT 240
EL3_strain_Gv18-4        RVDMDYAYVDYPSVIKKNAGLNGYKNGGSYAPQTSSIDEVAREVINGDWGNGNERKQRLT 240
EL10_strain_G30-4        RVDMDYAYVDYPSVIKKNAGLNGYKNGGSYAPQTSSIDEVAREVINGDWGNGIERKNRLT 240
EL12_strain_3549624_non-prophage RVDMDYAYVDYPSIIKKNAGLNGYKNGGSYAPQTSSIDVAREVINGAWGNGNERKQRLT 240
EL8_strain_JCP7719       RVDMDYAYKDYPSIIKKNAGLNGCKNGGSDQAARTSSIDEVAREVINGAWGNGNERKQRLT 240
EL5_strain_JCP7276       RVDMDYAYKDYPSIIKKNAGLNGCKNGGSDQAARTSSIDEVAREVINGAWGNGNERKQRLT 240
EL7_strain_AMD           RVDMDYAYKDYPSIIKKNAGLNGCKNGGSDQAARTSSIDEVAREVINGAWGNGNERKQRLT 240
EL4_strain_Gv5-1         RVDMDYAYVDYPSIIKNVGLNGCKNGGSDQAARTSSIDEVAREVINGAWGNGNERKQRLT 240
EL6_strain_1400E_frameshift RVDMDYAYKNYPSIIKKNAGLNGCKNGGSDQAARTSSIDVAREVINGAWGNGNERKQRLT 240
EL1_strain_HMP9231       RVDMDYAYVDYPSIIKKNAGLNGCKNGGSDQAARTSSIDEVAREVINGAWGNGSTRKQRLT 240
EL9_strain_0288E_incomplete_contig RVDMDYAYVDYPSIIKKNAGLNGCKNGGSDQAARTSSIDEVAREVINGAWGNGSTRKQRLT 240
EL2_strain_Gv18-4        RVDMDYAYVDYPSIIKNVGLNGCKNGGSDQAARTSSIDEVAREVINGAWGNGNERKQRLT 240
EL13_strain_Gv37_1       RVDMDYAYVDYPSIIKKNAGLNGYKNGESHQARTTSSIDEVAREVINGAWGNGNERKQRLT 240
EL14_strain_Gv37_2       RVDMDYAYVDYPSIIKKNAGLNGYKNGESHQARTTSSIDEVAREVINGAWGNGNERKQRLT 240
*****:*. :***:*. :***:*. :***:*. :***:***** *****:*****:*****

EL11_strain_JCP8017A      SAGYDYTSVQNKVNELLGVKAYRKSVDELAREVIRGTWNGSTRKQRLTQAGYDYDAVQK 300
SAGYDYASVQNKVNELLGVKAYRKSVDELAREVIRGTWNGSMRKHRLTQAGYDYDAVQK 300
EL3_strain_Gv18-4        SAGYDYASVQNKVNELLGVKAYRKSVDELAREVIRGTWNGSTRKQRLTQAGYDYNAVQK 300
EL10_strain_G30-4        SAGYDYTSVQNKVNELLGVKAYRKSVDELAREVIRGTWNGSTRKQRLTQAGYDYNAVQK 300
EL12_strain_3549624_non-prophage SAGYDYTSVQNKVNELLGVKACRKSVDLAREVIRGTWNGNERKNRLTQAGYDYDTVQK 300
EL8_strain_JCP7719       SAGYDYTSVQNKVNELLGVKACRKSVDLAREVIRGTWNGNERKNRLTQAGYDYDTVQK 300
EL5_strain_JCP7276       SAGYDYTSVQNKVNELLGVKACRKSVDLAREVIRGTWNGNERKNRLTQAGYDYDTVQK 300
EL7_strain_AMD           SAGYDYTSVQNKVNELLGVKACRKSVDLAREVIRGTWNGNERKNRLTQAGYDYDTVQK 300
EL4_strain_Gv5-1         SAGYDYASVAK----- 251
EL6_strain_1400E_frameshift SAGYDYASVQNKVNELLGVKACRKSVDLAREVIRGAWGNGSTRKQLAQAGYDYDTVQK 300
EL1_strain_HMP9231       SAGYDYASVAK----- 251
EL9_strain_0288E_incomplete_contig SAGYDYASVQNKVNELLGVKACRKSVDLAREVIRGTWNGSTRKQRLTQAGYDYDTVQK 300
EL2_strain_Gv18-4        SAGYDYASVQNKVNELLGVKACRKSVDLAREVIRGTWNGNERKNRLTSAGYDYDTVQK 300
EL13_strain_Gv37_1       SAGYDYASVQNKVNELLGVKACRKSVDLAREVIRGTWNGNERKNRLTSAGYDYDTVQK 300
EL14_strain_Gv37_2       SAGYDYASVQNKVNELLGVKACRKSVDLAREVIRGAWGNGSTRKQRLTSAGYDYDTVQK 300
*****:***:

EL11_strain_JCP8017A      RVNELL 306
EL3_strain_Gv18-4        RVNELL 306
EL10_strain_G30-4        RVNELL 306
EL12_strain_3549624_non-prophage RVNELL 306
EL8_strain_JCP7719       RVNELL 306
EL5_strain_JCP7276       RVNELL 306
EL7_strain_AMD           RVNELL 306
EL4_strain_Gv5-1         RVNELL 306
EL6_strain_1400E_frameshift ----- 251
EL1_strain_HMP9231       RVNELL 306
EL9_strain_0288E_incomplete_contig ----- 251
EL2_strain_Gv18-4        RVNELL 306
EL13_strain_Gv37_1       RVNELL 306
EL14_strain_Gv37_2       RVNELL 306

```

Figure 2

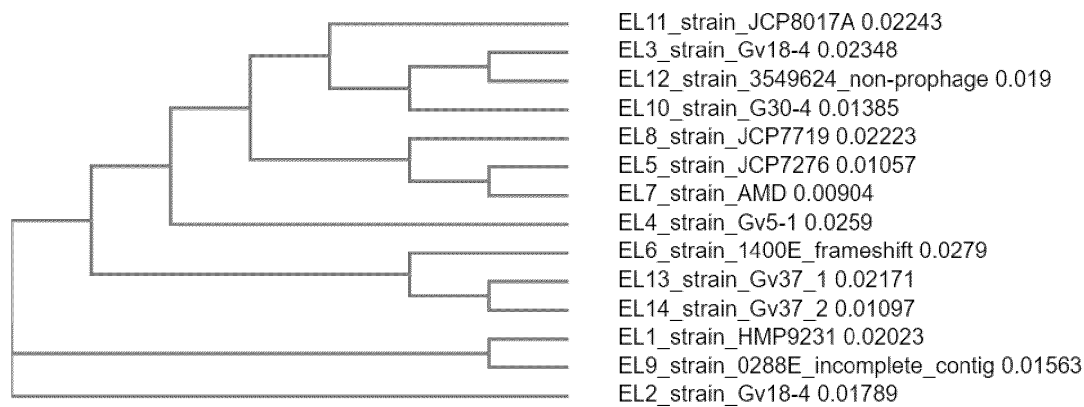


Figure 3

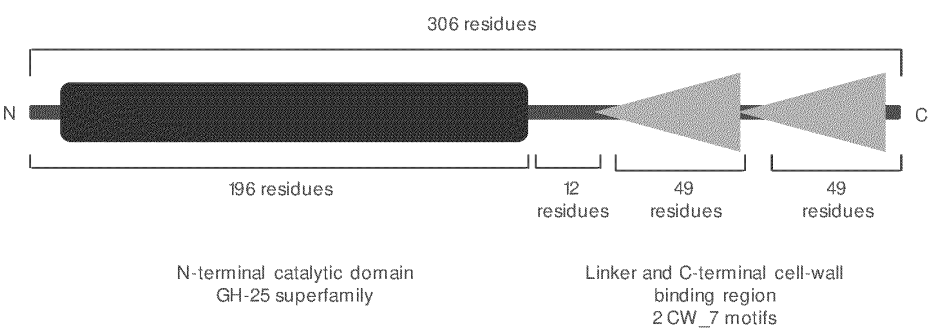


Figure 4A

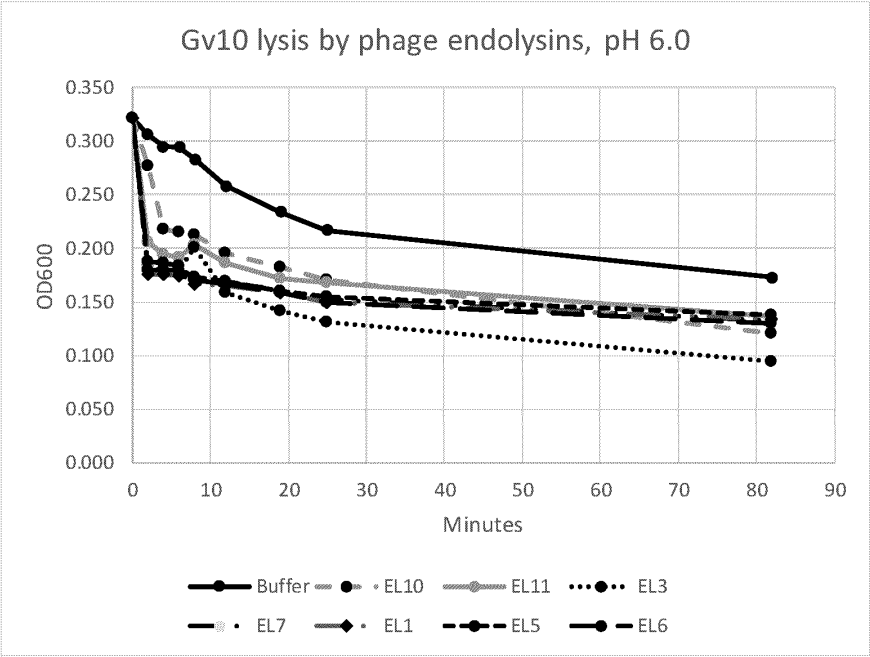


Figure 4B

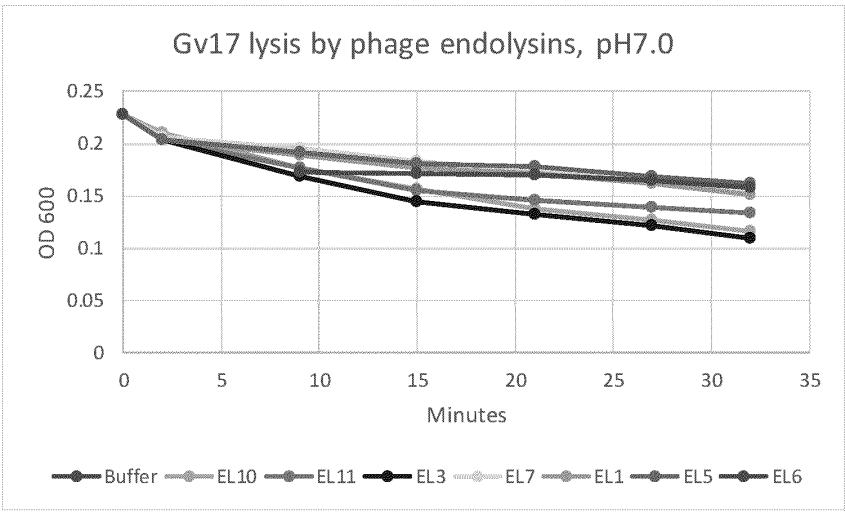


Figure 4C

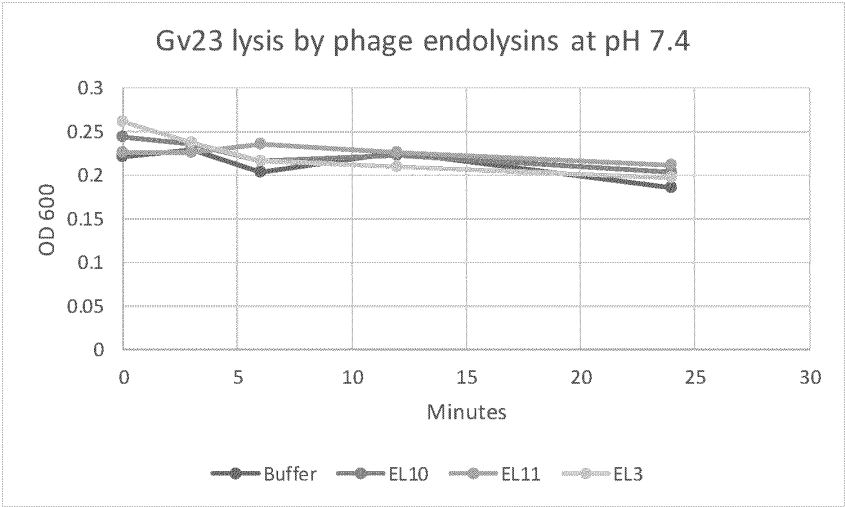


Figure 5

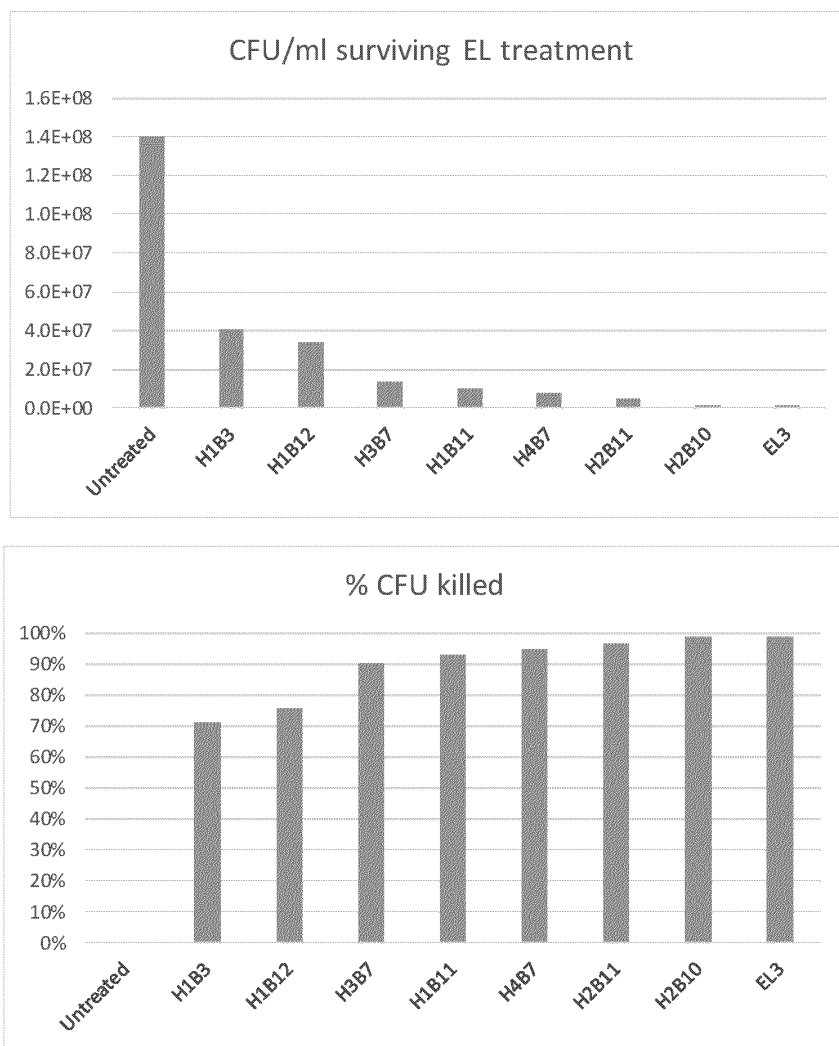


Figure 6

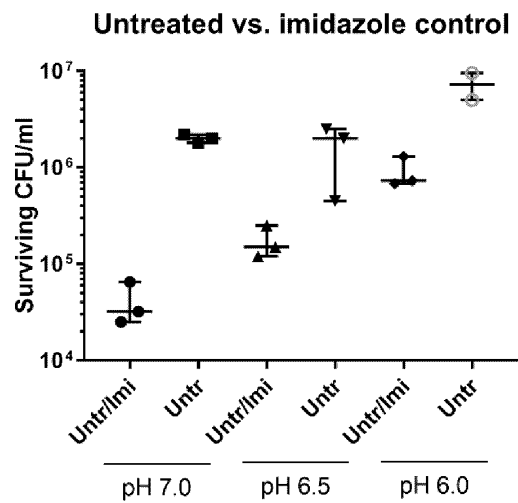


Figure 7

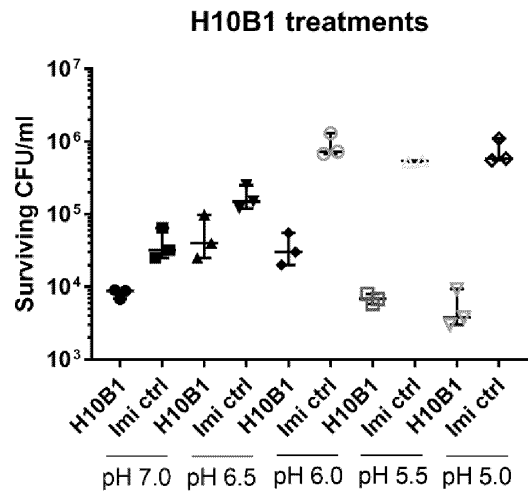


Figure 8A

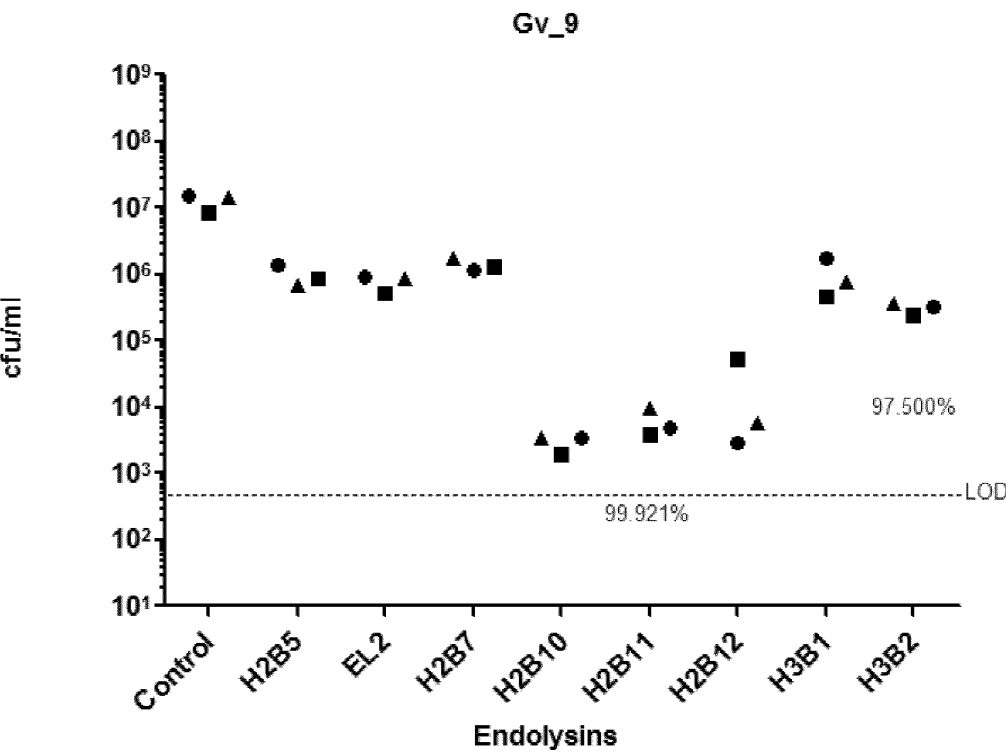


Figure 8B

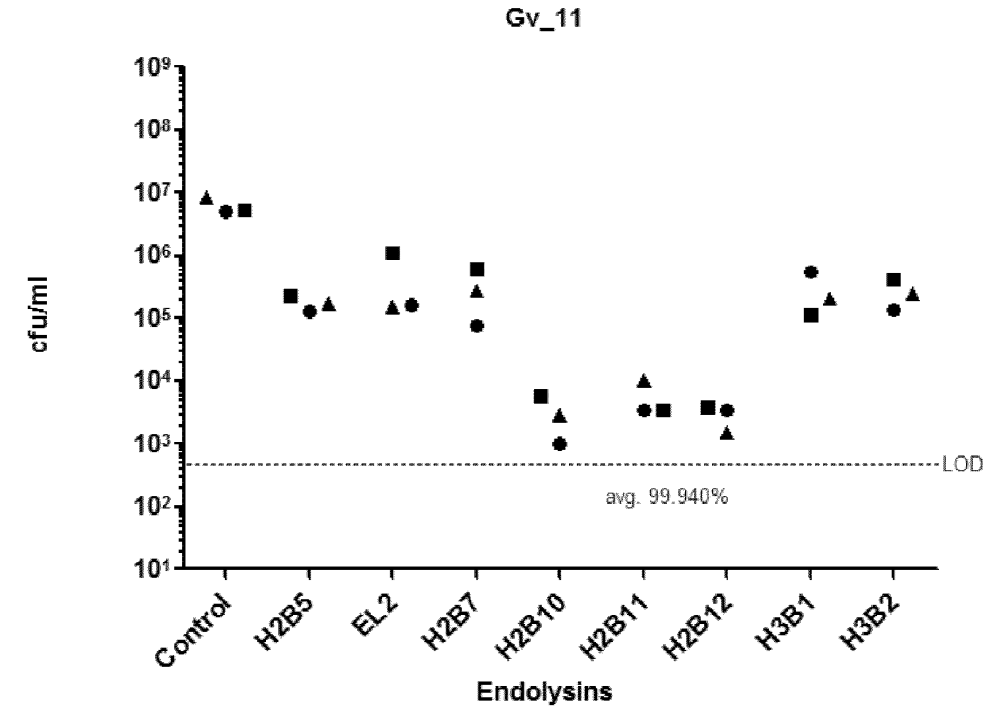


Figure 8C

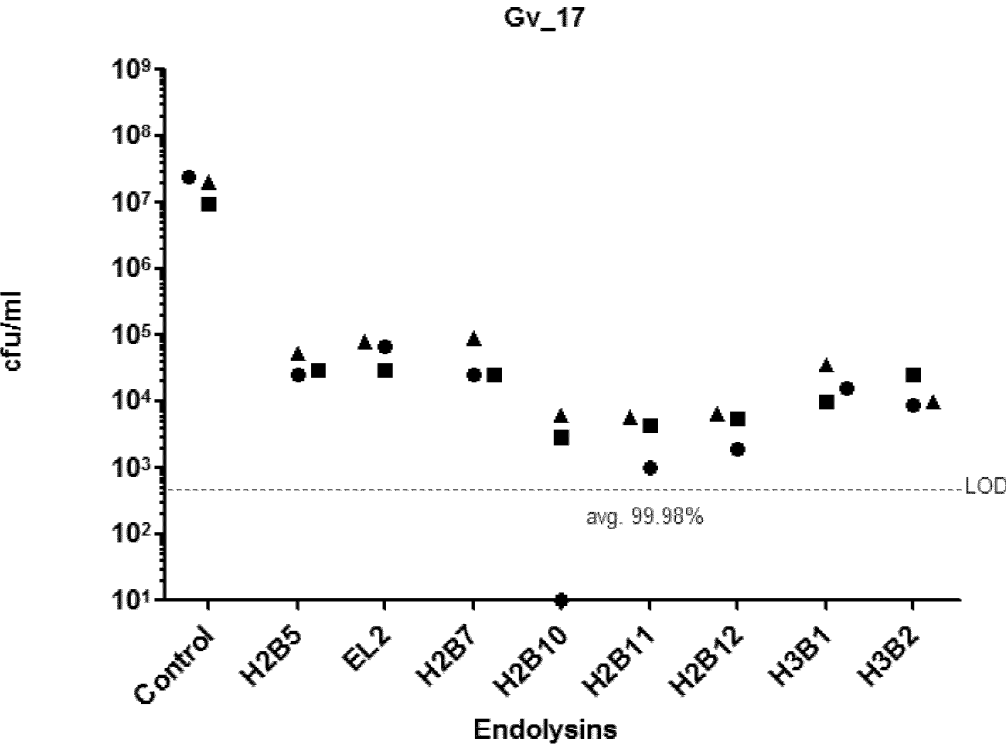


Figure 8D

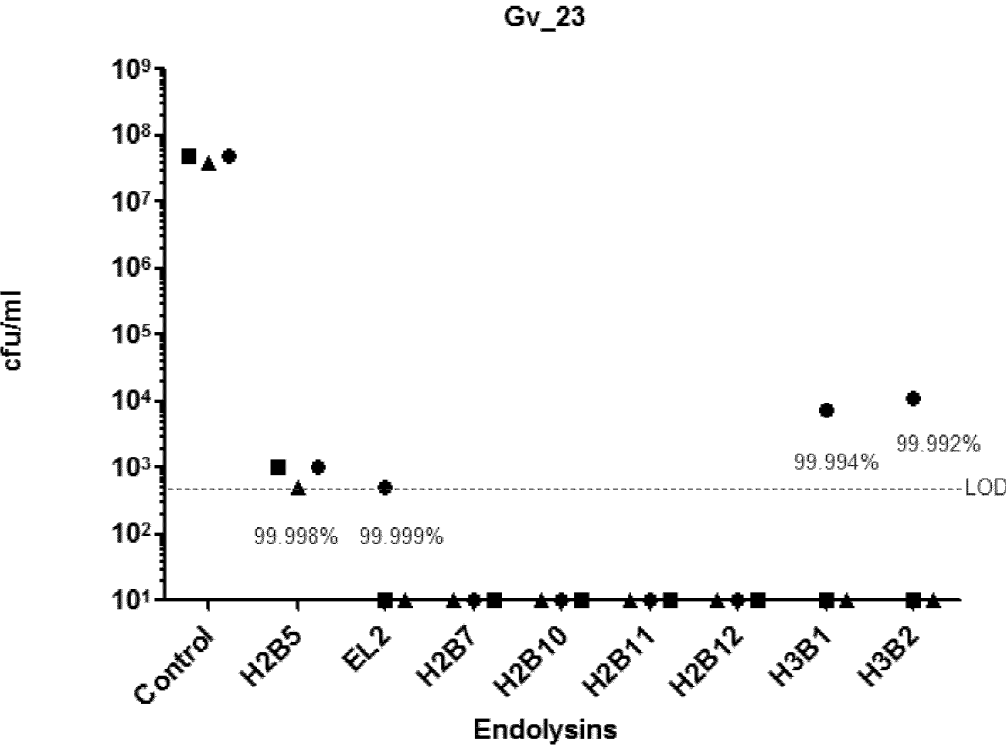


Figure 9

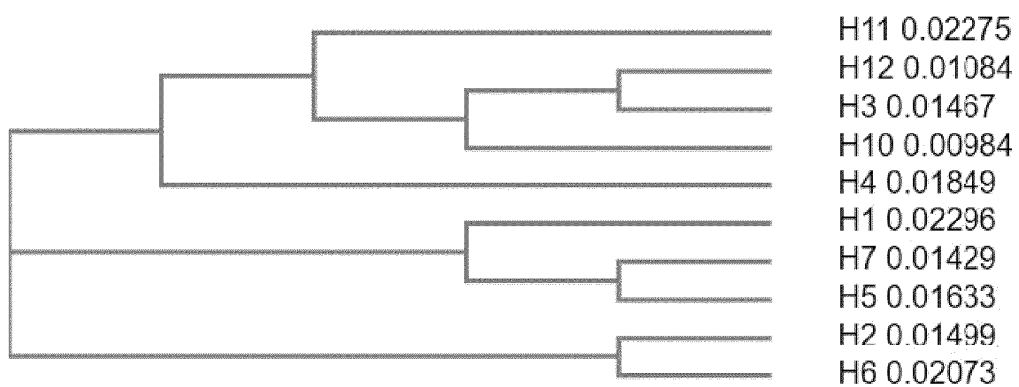


Figure 10

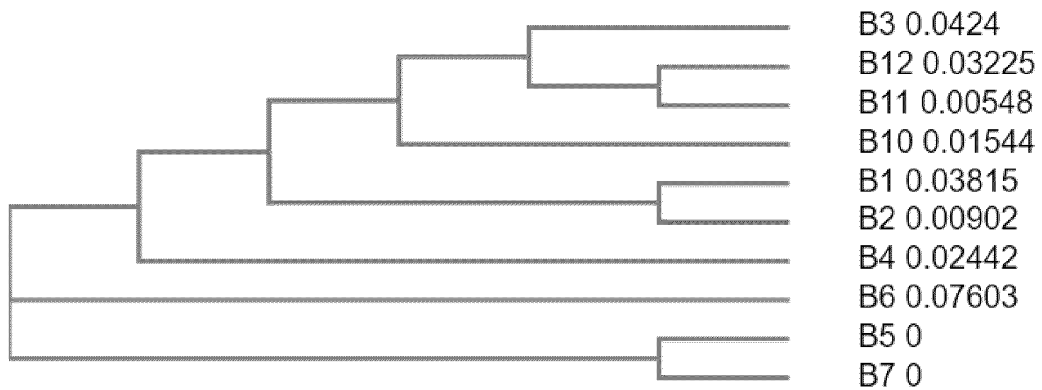


Figure 11

B3_C	GVKAYRKSVDLAREVIRGTWGNNGSMRKHRLTQAGYDYDAVQKRVNELL	49
B12_C	GVKAYRKSVDLAREVIRGTWGNNGKTRKQRLTQAGYDYNQKRVNELL	49
B10_C	GVKAYRKSVDLAREVIRGTWGNNGSTRKQRLTQAGYDYNQKRVNELL	49
B11_C	GVKAYRKSVDLAREVIRGTWGNNGSTRKQRLTQAGYDYDAVQKRVNELL	49
B1_C	GVKACRKSVDLAREVIRGAWGNNGSTRKQRLAQAGYDYDTVQKRVNELL	49
B2_C	GVKACRKSVDLAREVIRGTWGNNGSTRKQRLTQAGYDYDTVQKRVNELL	49
B4_C	GVKAYRKSVDLAREVIRGTWGNNGNERKQRLAQAGYDYDTVQKRVNELL	49
B5_C	GVKACRKSVDLAREVIRGTWGNNGNERKNRLTQAGYDYDTVQKRVNELL	49
B7_C	GVKACRKSVDLAREVIRGTWGNNGNERKNRLTQAGYDYDTVQKRVNELL	49
B10_N	YTAPQISSIDEVAREVINGDWGNNGNERKQRLTSAGYDYASVQNKVNELL	49
B3_N	YTAPQTSSIDEVAREVINGDWGNNGNDRKNRLISAGYDYASVQNKVNELL	49
B11_N	YTAPQTSSIDEVAREVINGDWGNNGNERKNRLTSAGYDYTSVQNKVNELL	49
B12_N	YTAPQTSSIDEVAREVINGDWNGIERKNRLTSAGYDYTSVQNKVNELL	49
B6_N	NQAARTSSIDVAREVINGAWGNNGNERKQRLTQAGYDYASVAK-----	43
B5_N	DQAARTSSIDEVAREVINGAWGNNGNERKQRLTQAGYDYTSVQNKVNKLL	49
B7_N	DQAARTSSIDEVAREVINGAWGNNGNERKQRLTQAGYDYTSVQNKVNKLL	49
B4_N	DQATRTSSIDEVAREVINGAWGNNGNERKQRLTSAGYDYASVQNKVNKLL	49
B1_N	DQAARTSSIDEVAREVINGAWGNNGSTRKQRLTSAGYDYASVQNKVNELL	49
B2_N	DQAARTSSIDEVAREVINGAWGNNGNERKQRLTSAGYDYASVQNKVNELL	49

.*:*:*****.* ***** **:*. ***** :* :

Figure 12

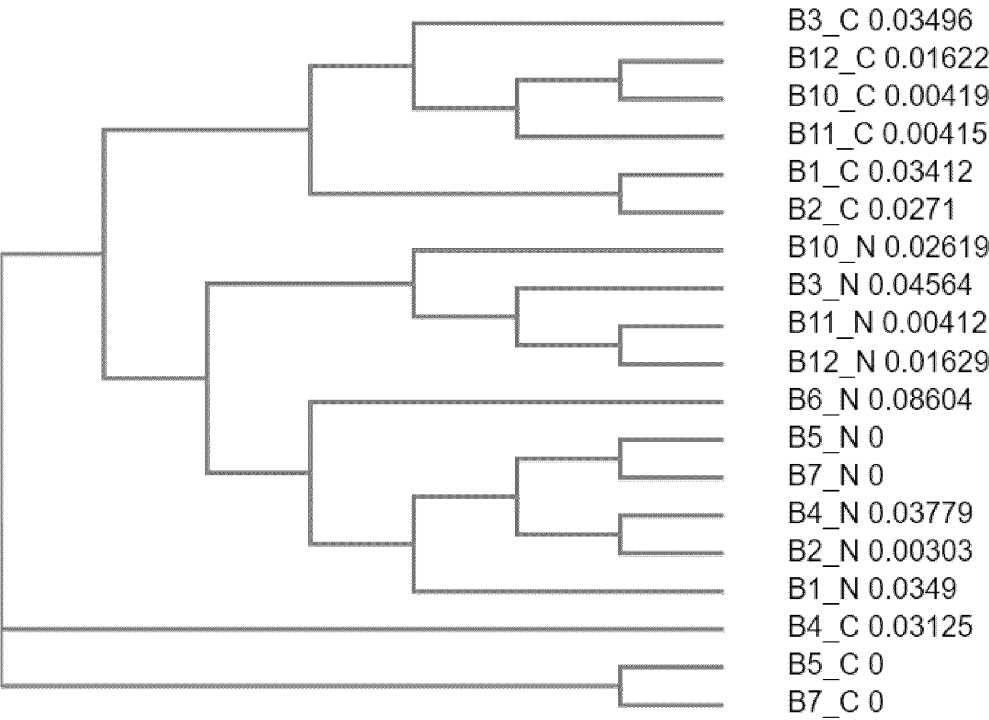


Figure 13

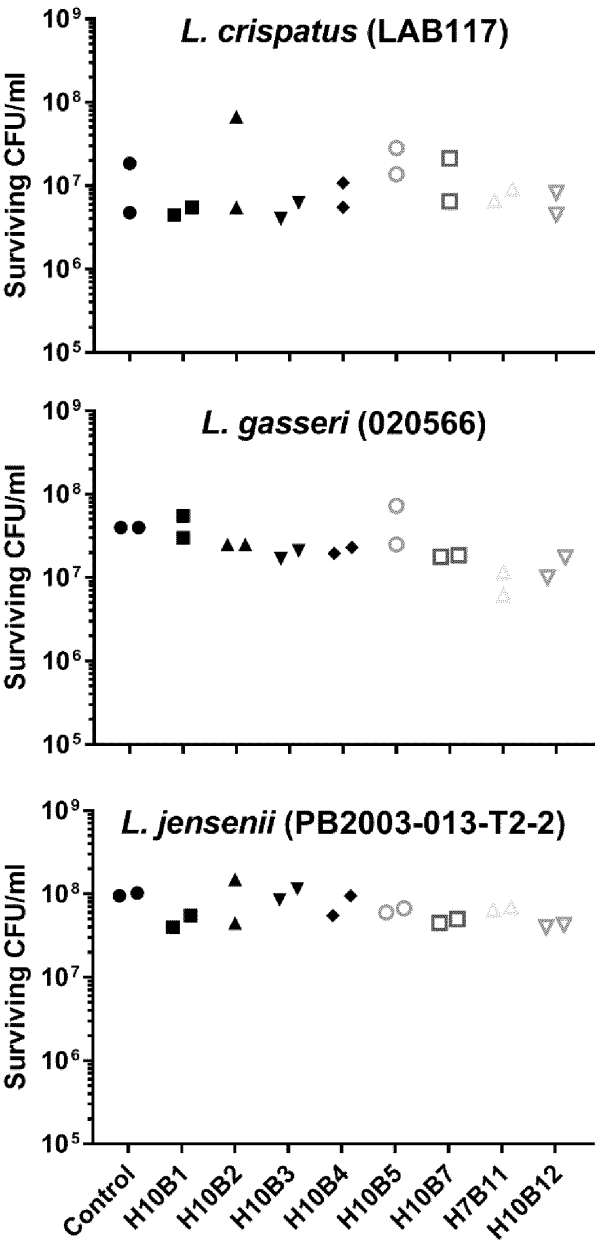


Figure 14

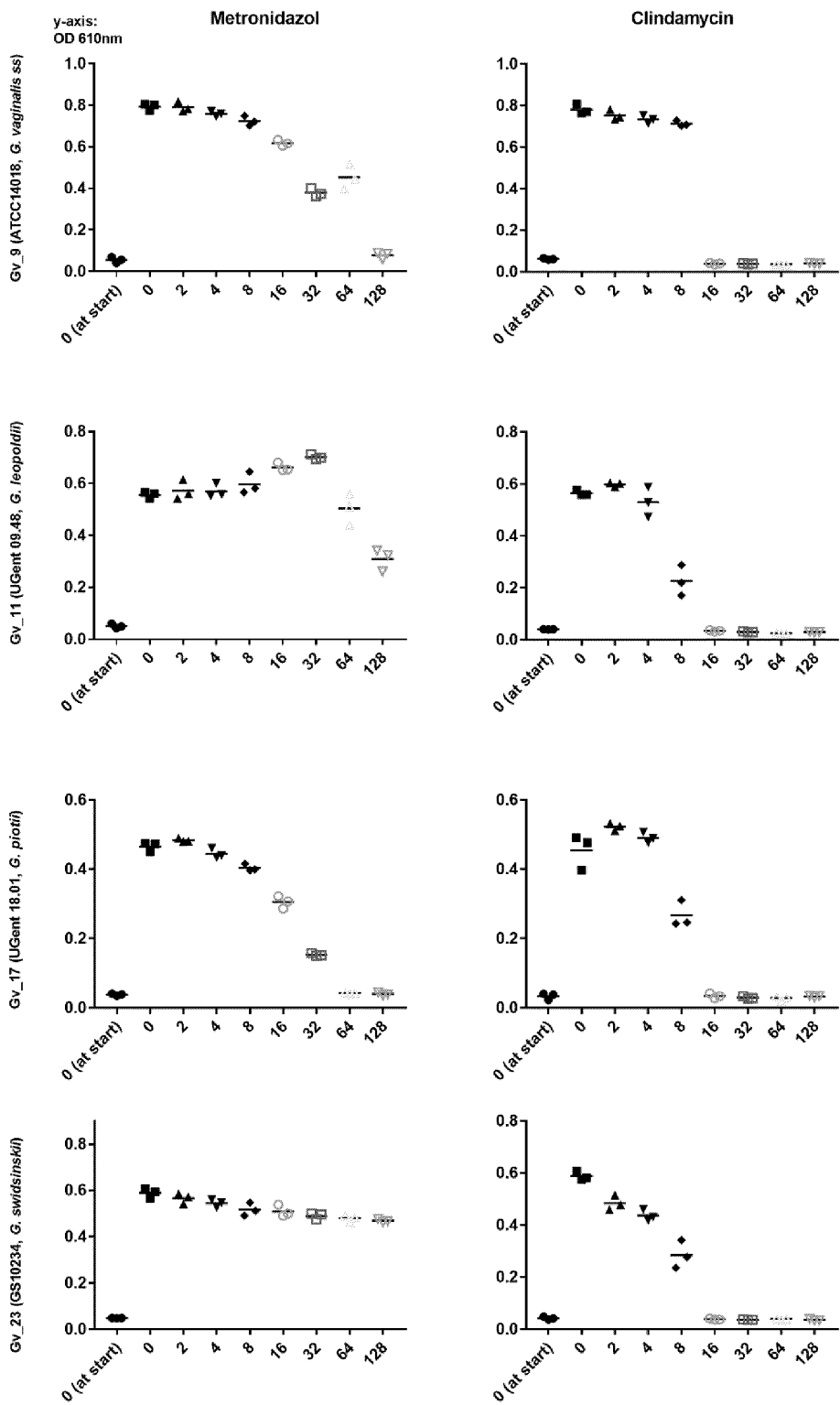


Figure 15

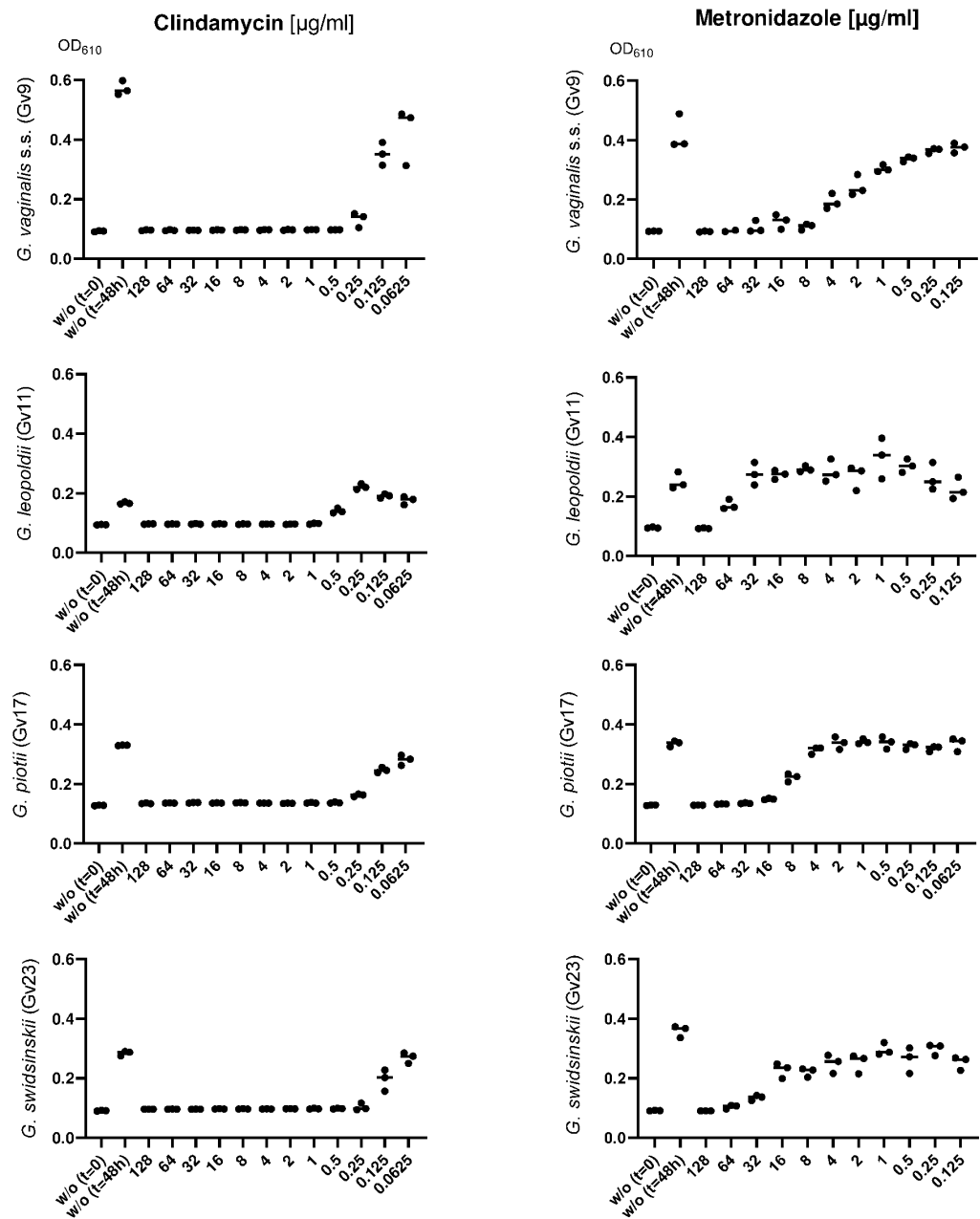


Figure 16

