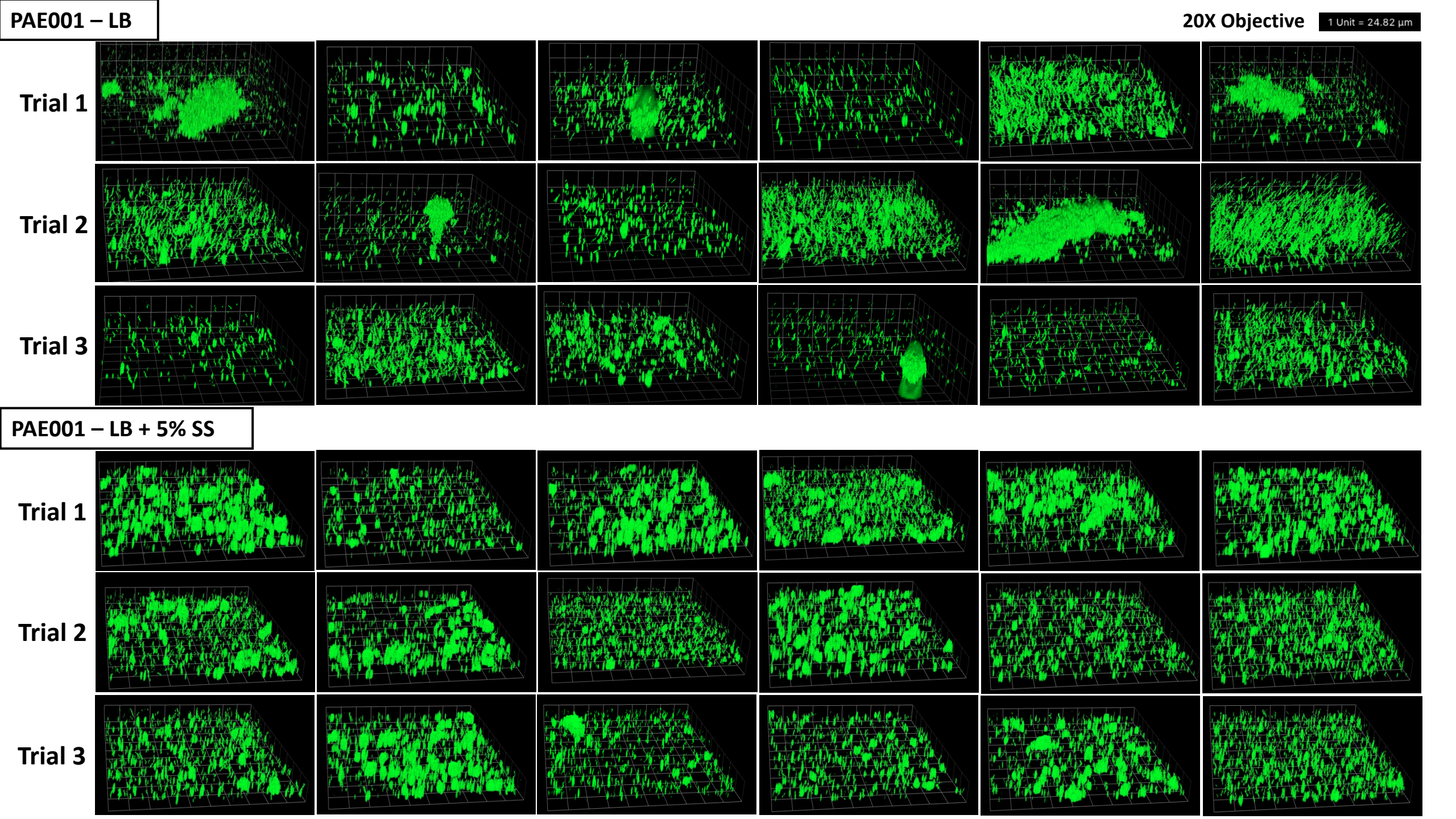
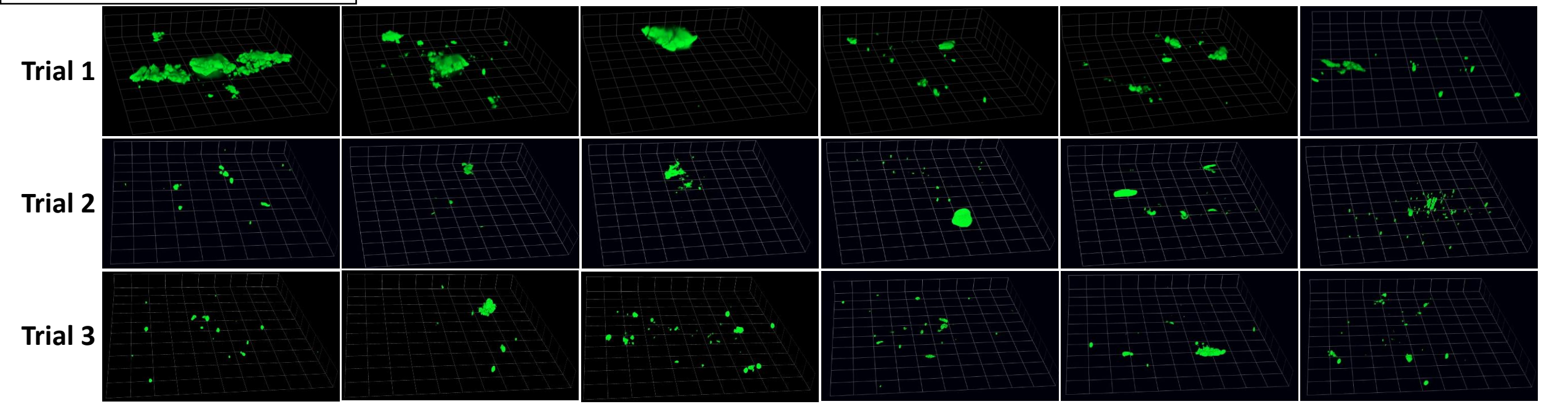


# Supplementary Figure S1

CLSM representative images of the 11 sputum hydrogels and corresponding 11 PA isolates grown *in vitro* as biofilms in LB alone and LB with 5% sputum supernatant. The FISH PseaerA (green) probe and the SYTO9 (green) fluorescent nucleic acid stain were used to visualize PA in the sputum hydrogels and the chamber wells, respectively.



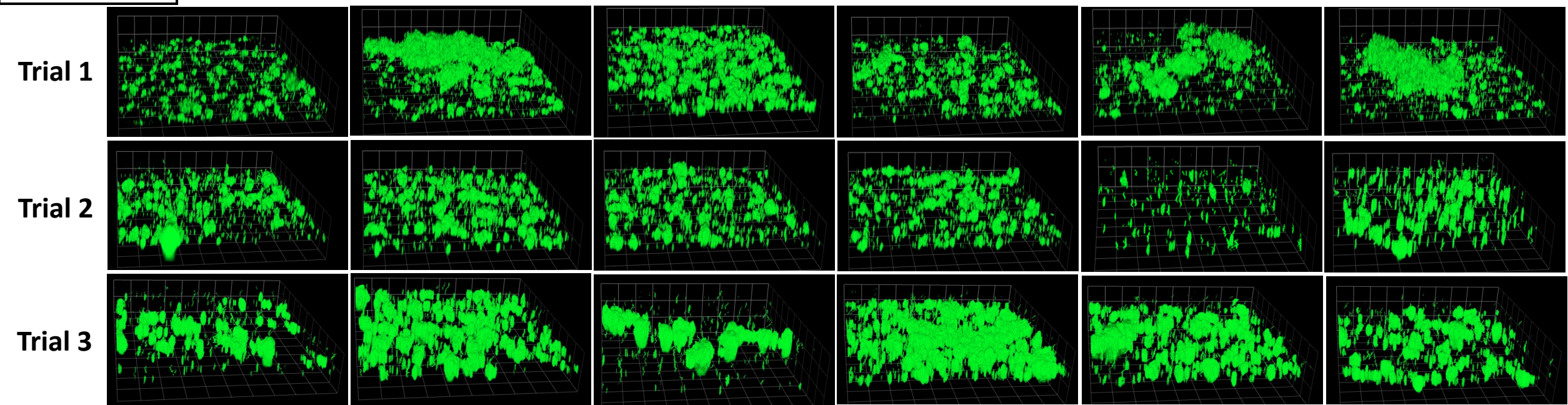




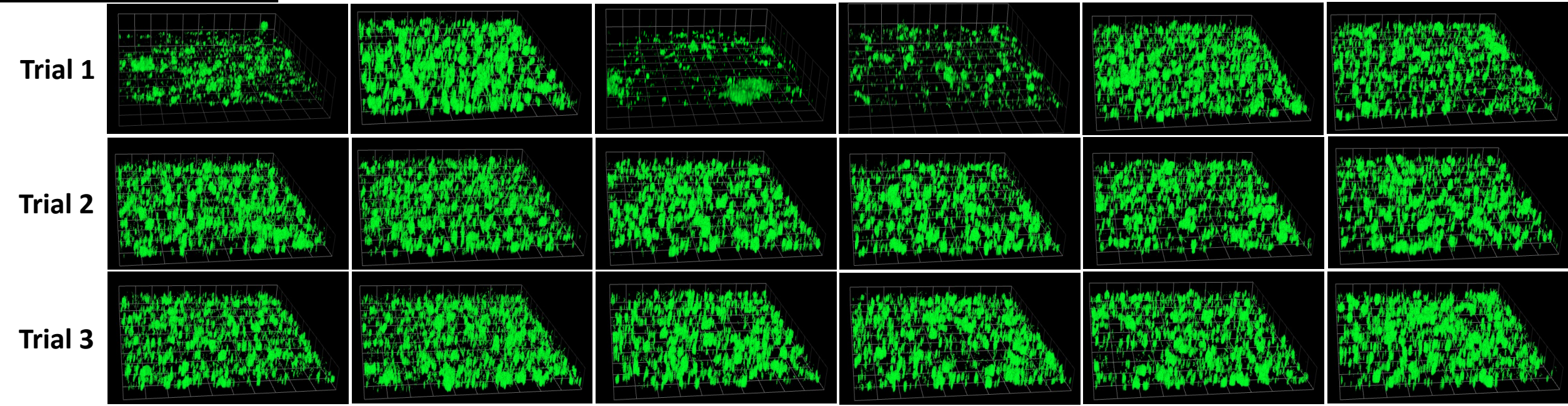


PAE002 – LB

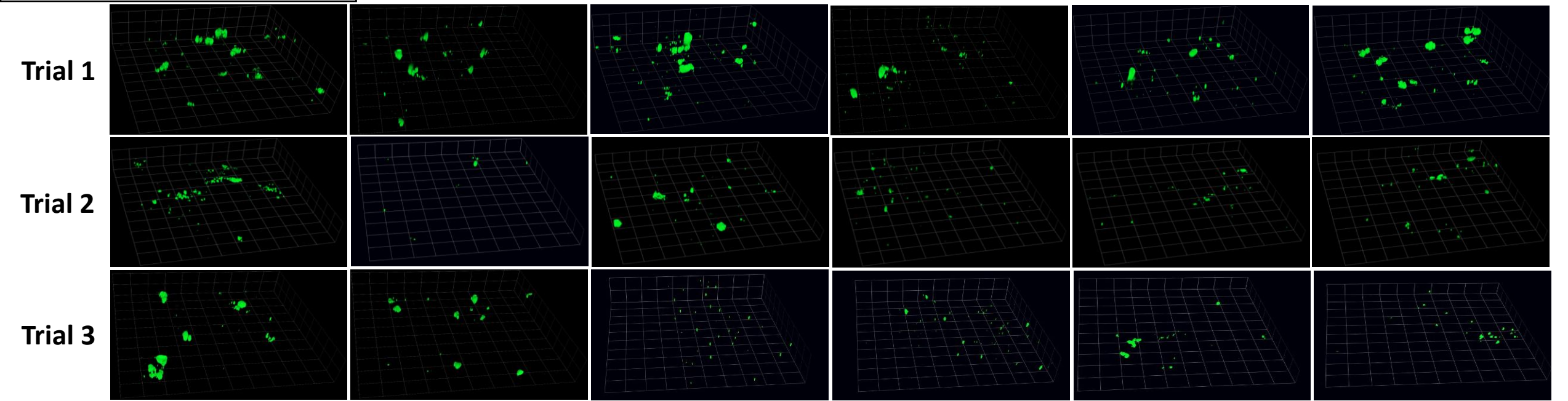
20X Objective 1 Unit = 24.82  $\mu$ m



PAE002 – LB + 5% SS



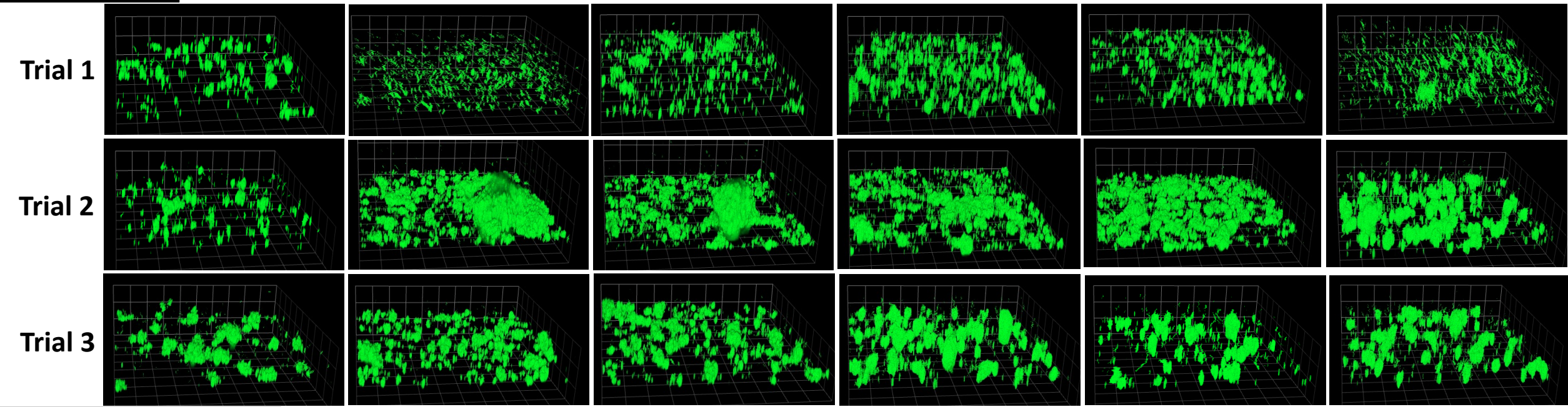




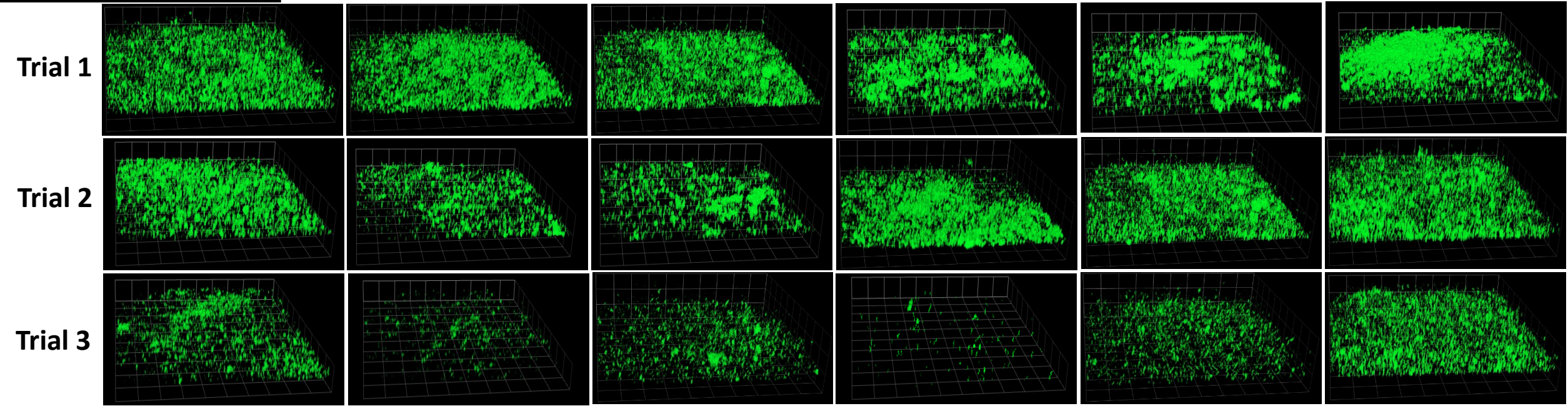


**PAE003 – LB**

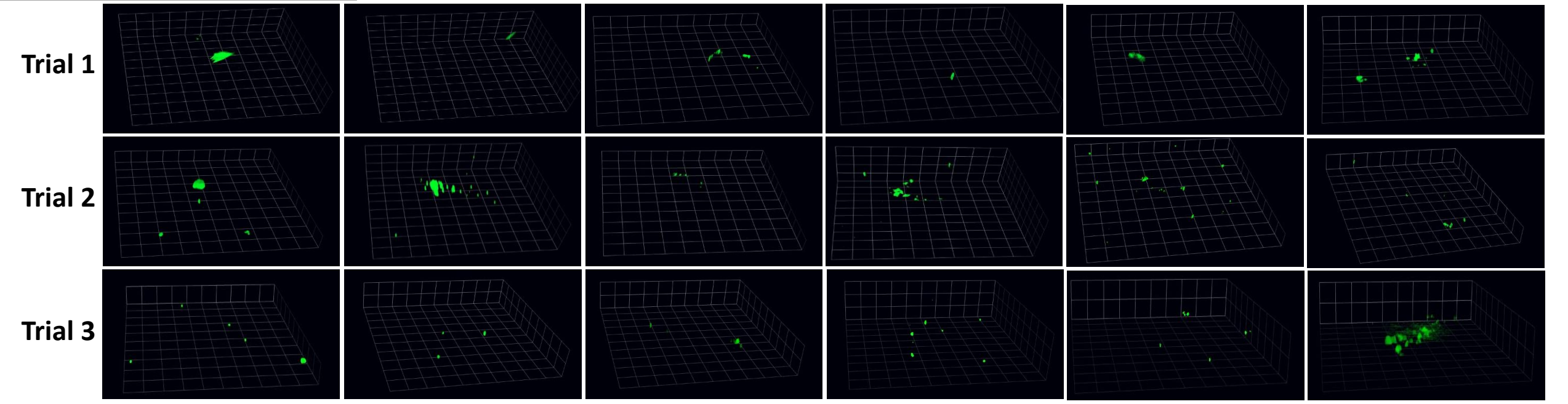
**20X Objective** 1 Unit = 24.82  $\mu$ m



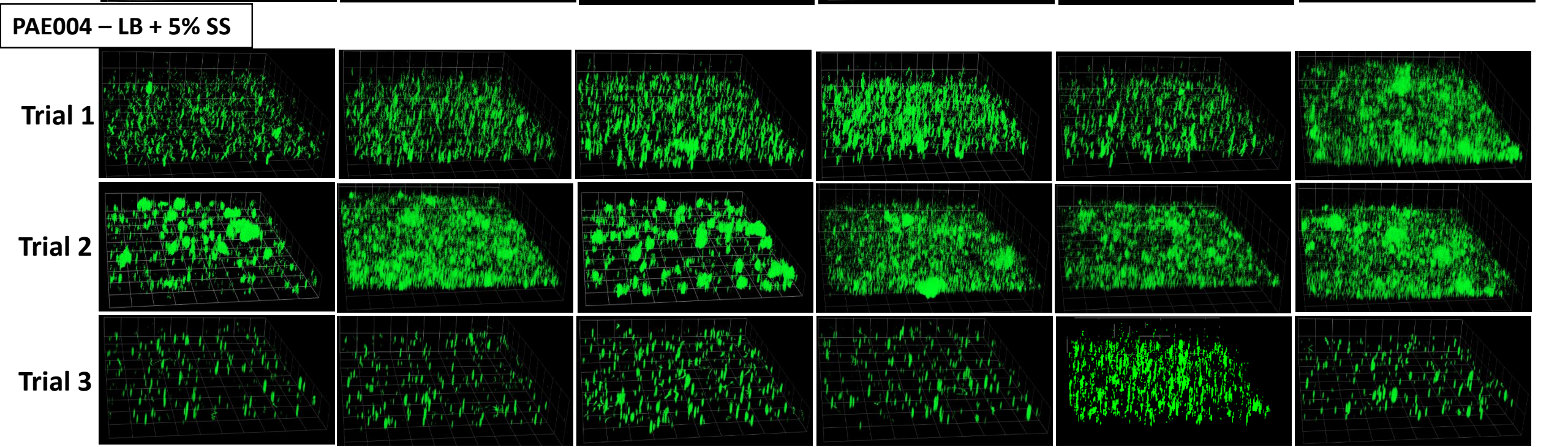
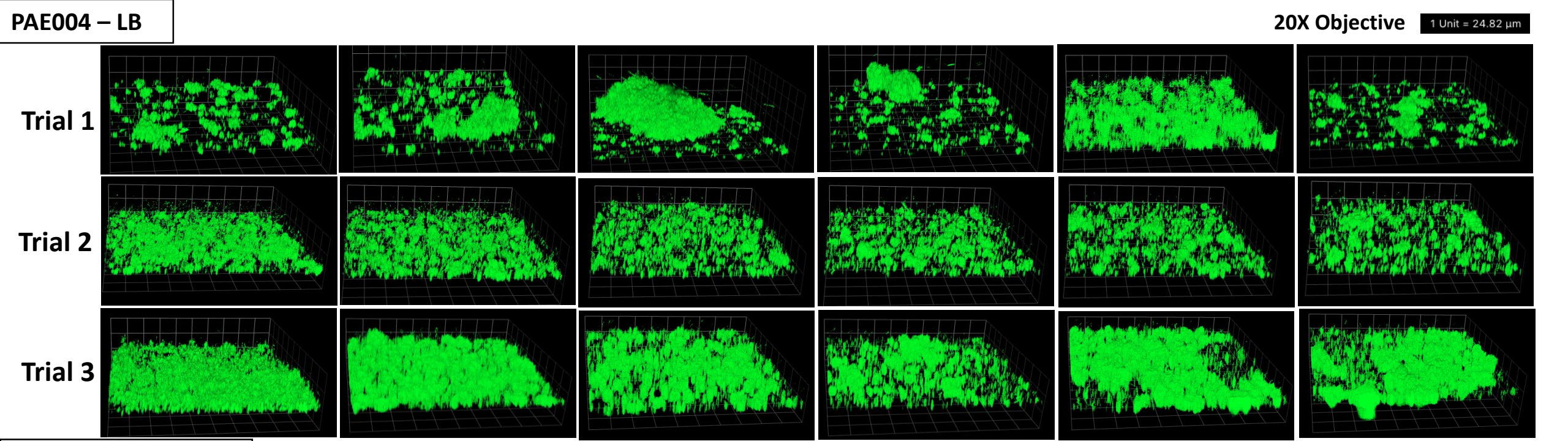
**PAE003 – LB + 5% SS**







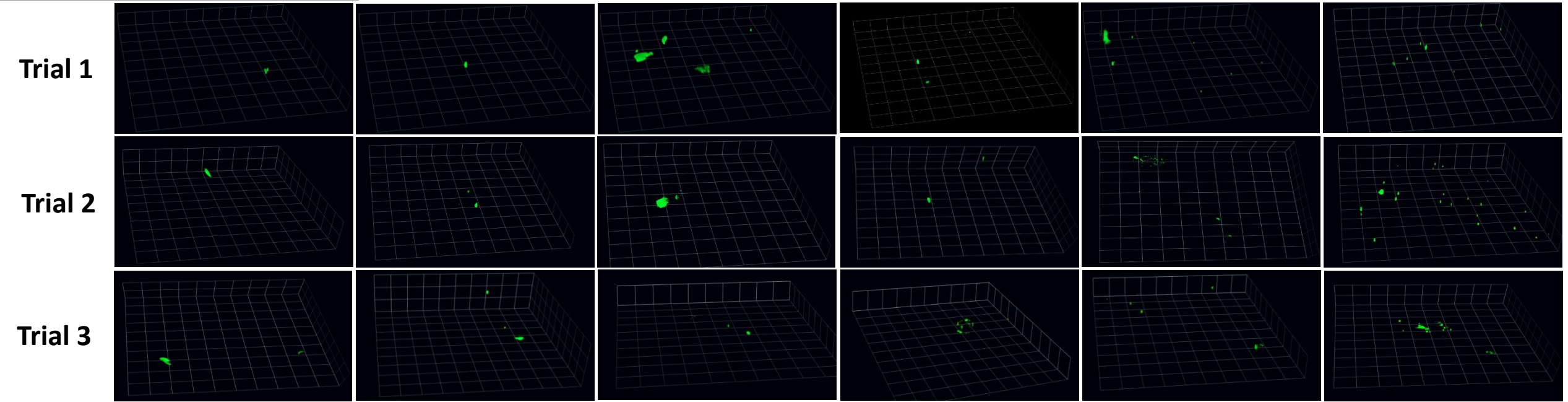






PAE004 – Sputum hydrogel

20X Objective 1 Unit = 24.82 μm



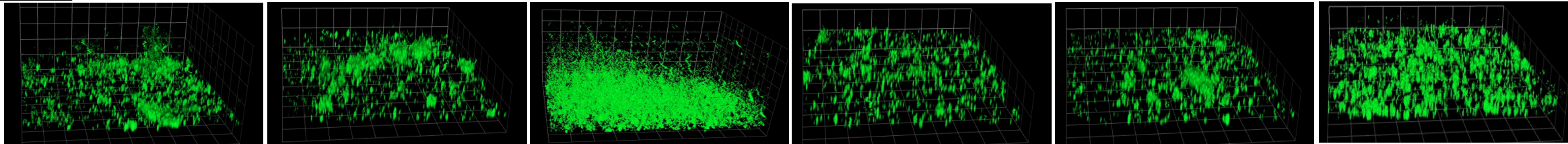


PAE005 – LB

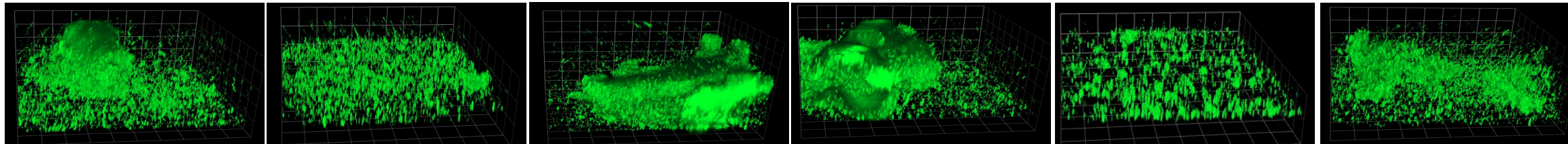
20X Objective

1 Unit = 24.82  $\mu\text{m}$

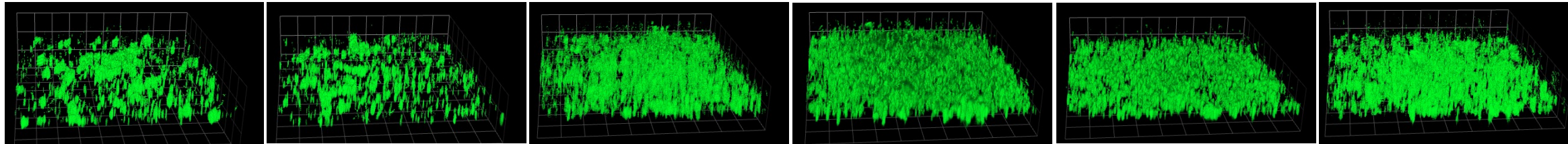
Trial 1



Trial 2

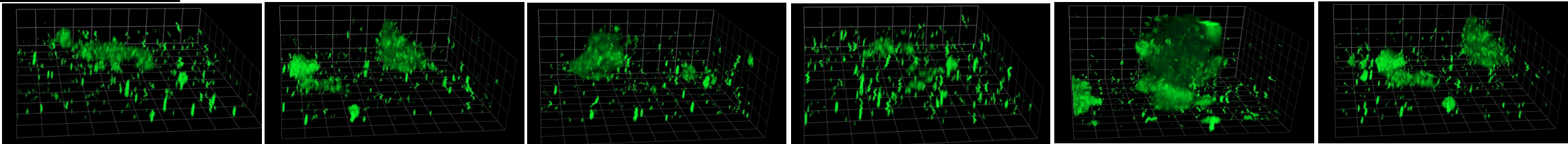


Trial 3

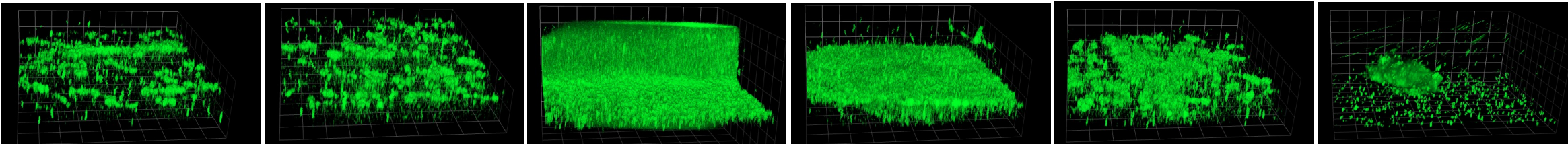


PAE005 – LB + 5% SS

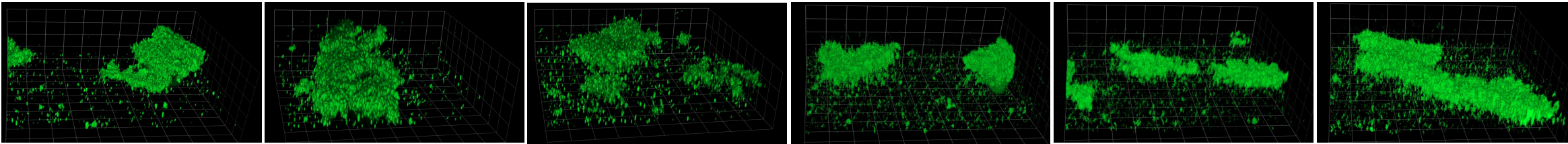
Trial 1



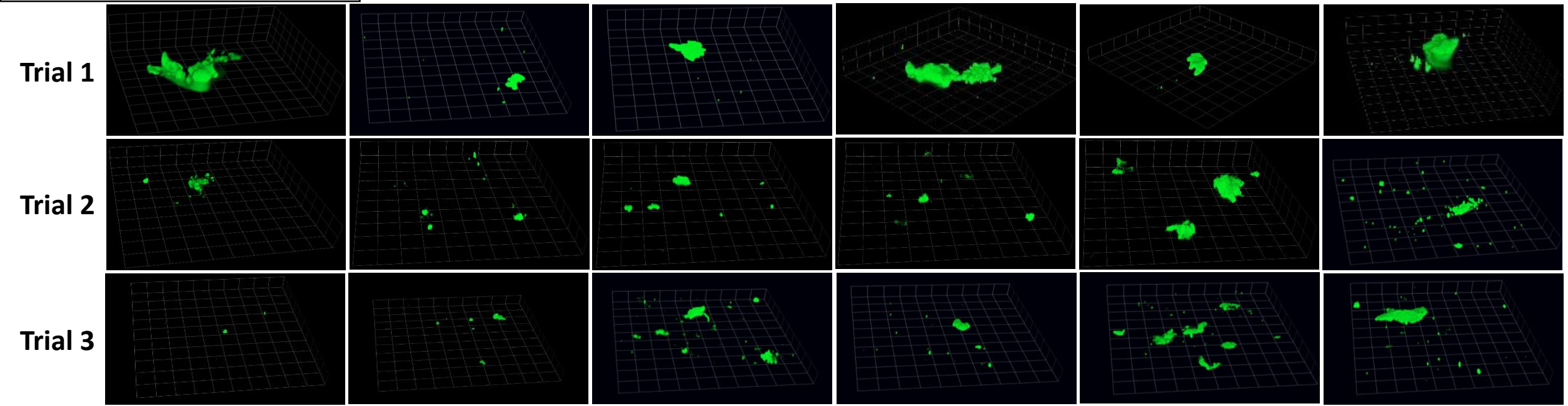
Trial 2



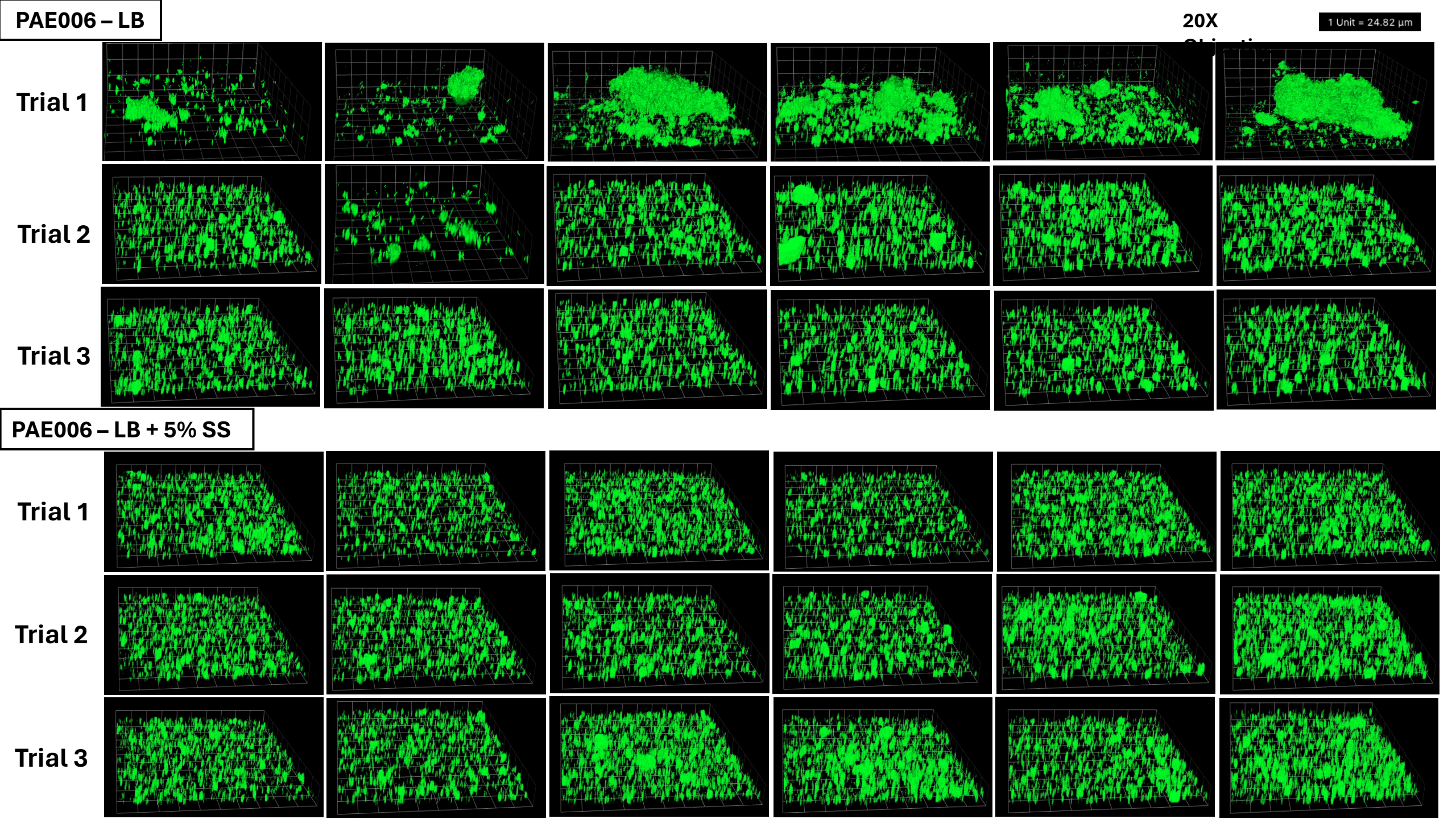
Trial 3



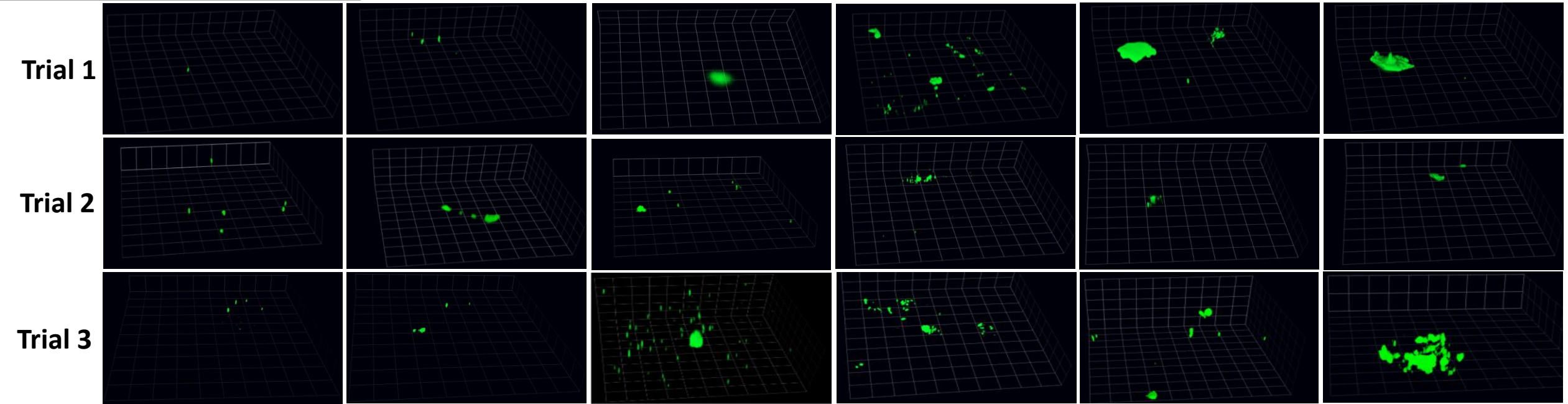












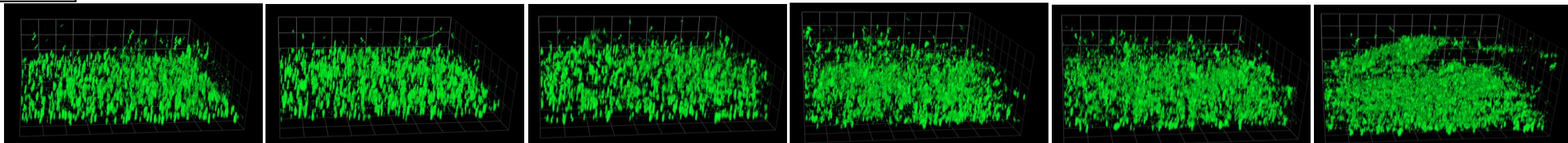


PAE007 – LB

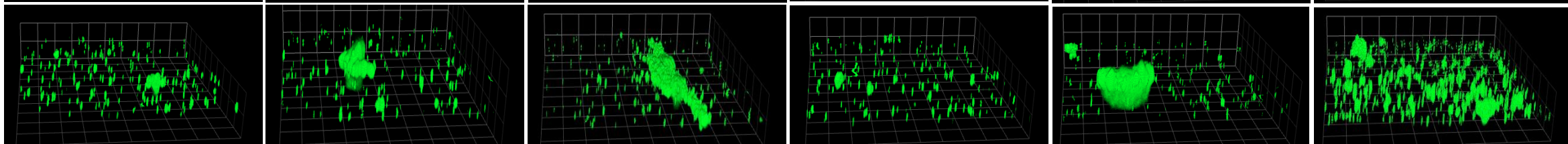
20X Objective

1 Unit = 24.82  $\mu\text{m}$

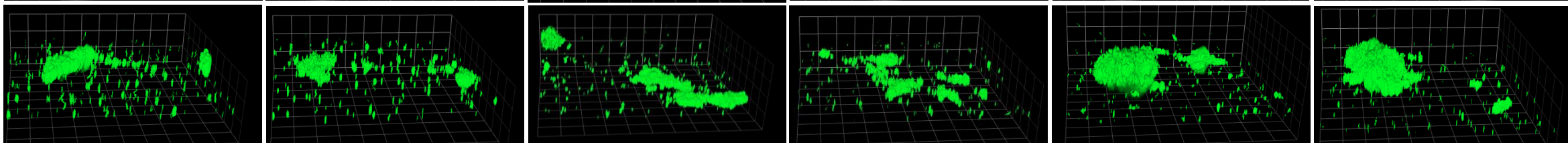
Trial 1



Trial 2

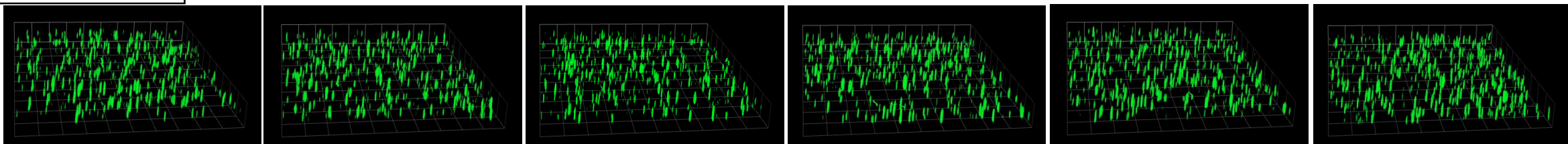


Trial 3

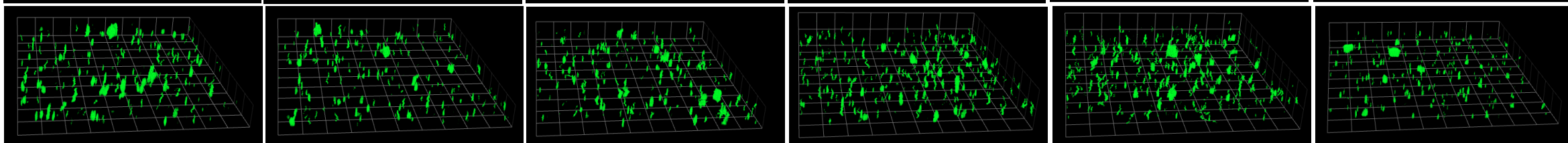


PAE007 – LB + 5% SS

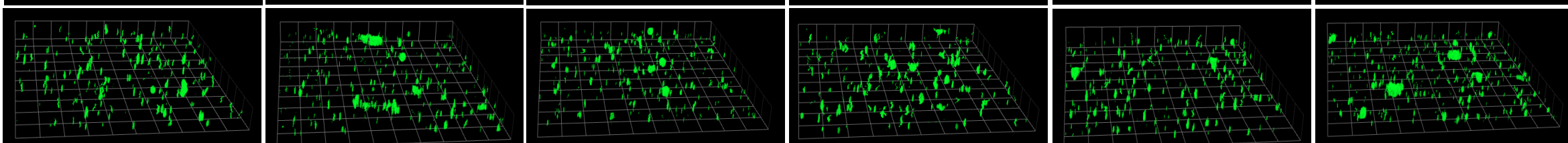
Trial 1

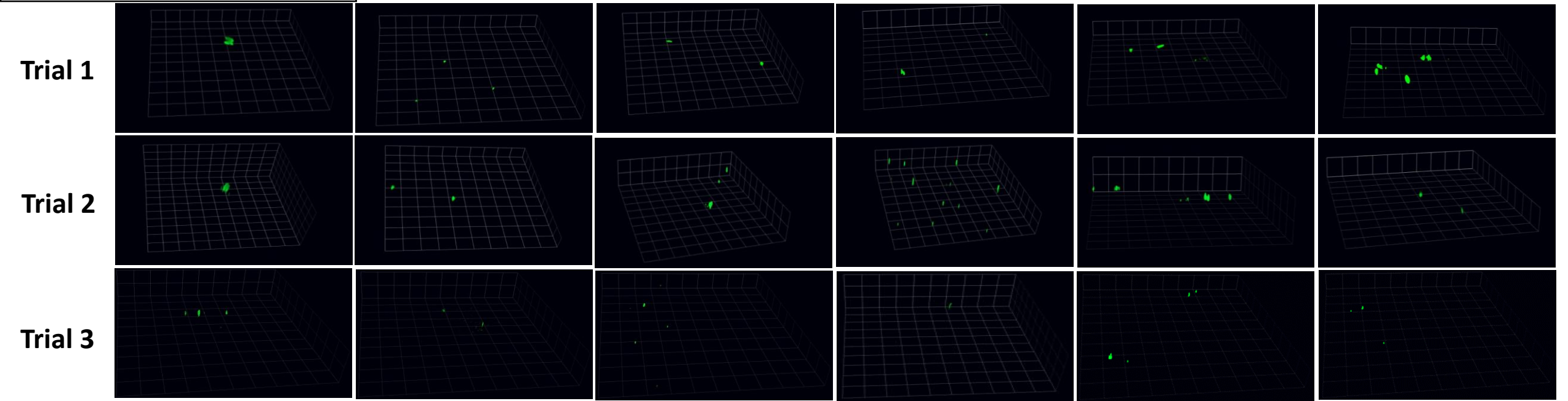


Trial 2



Trial 3





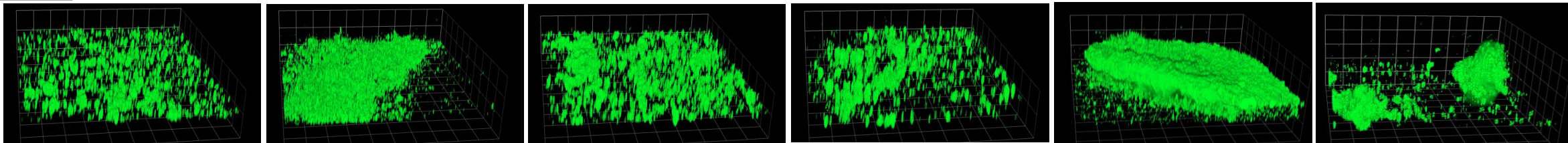


PAE008 – LB

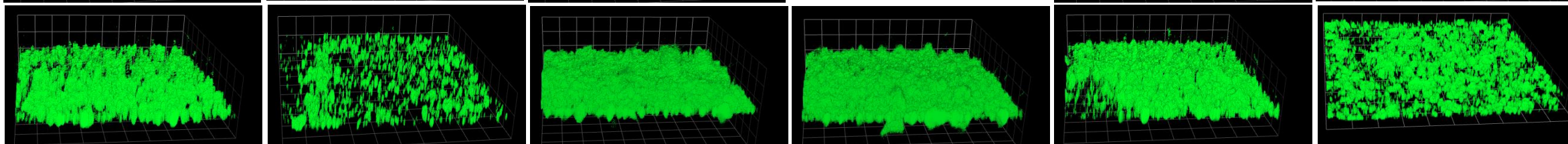
20X Objective

1 Unit = 24.82  $\mu$ m

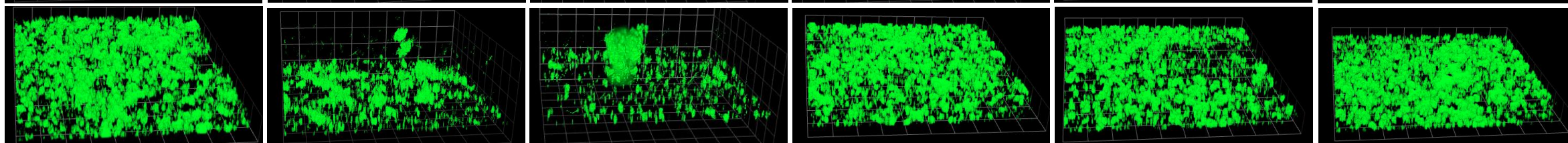
Trial 1



Trial 2

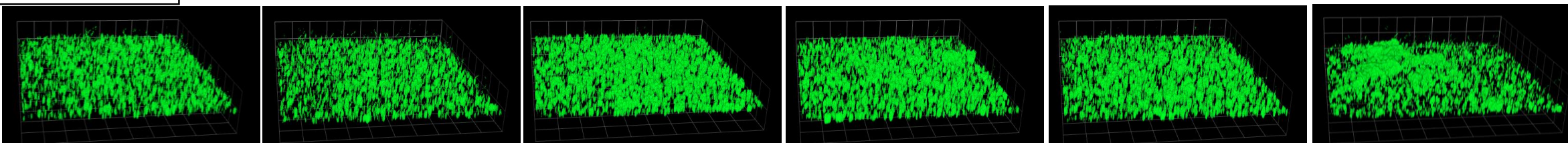


Trial 3

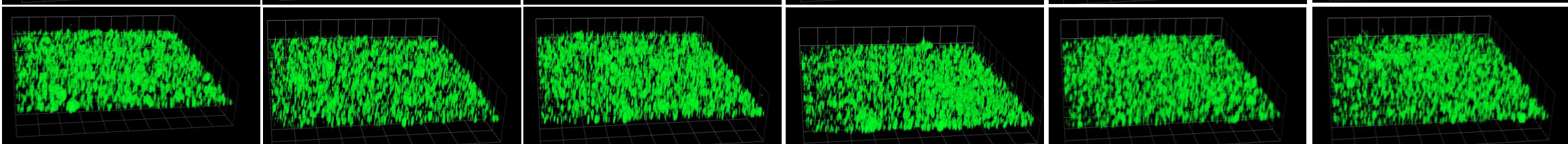


PAE008 – LB + 5% SS

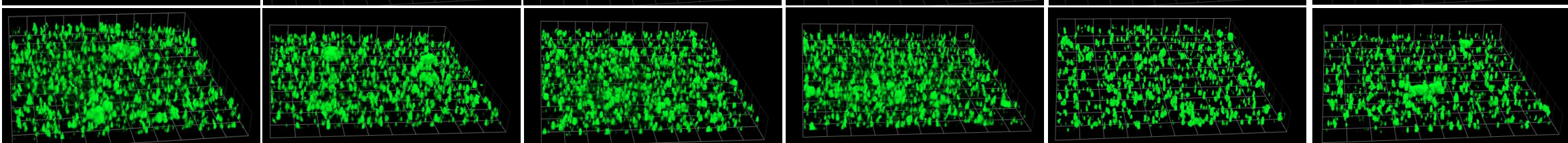
Trial 1



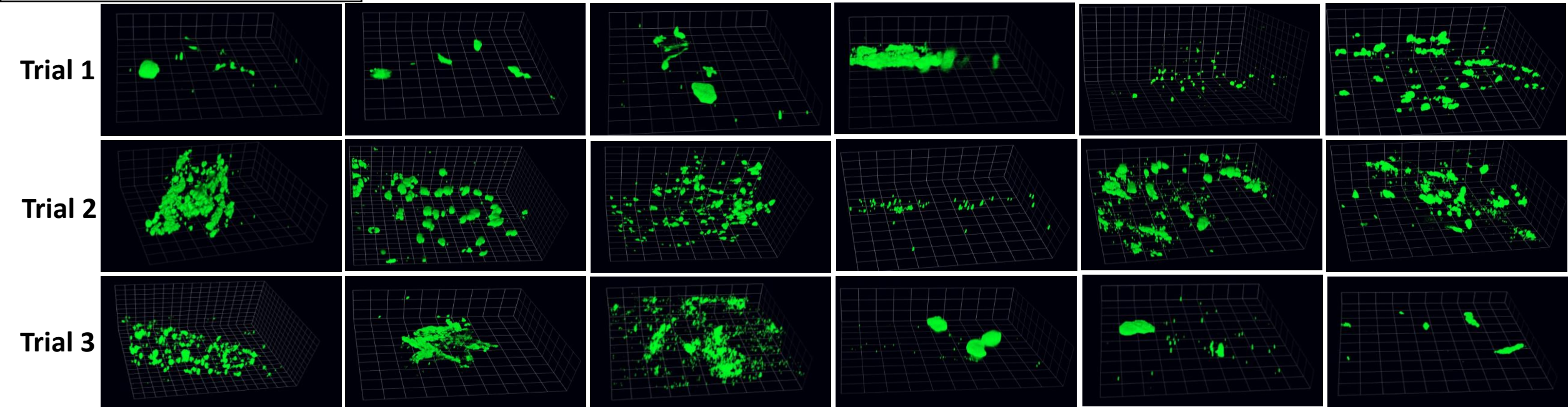
Trial 2



Trial 3







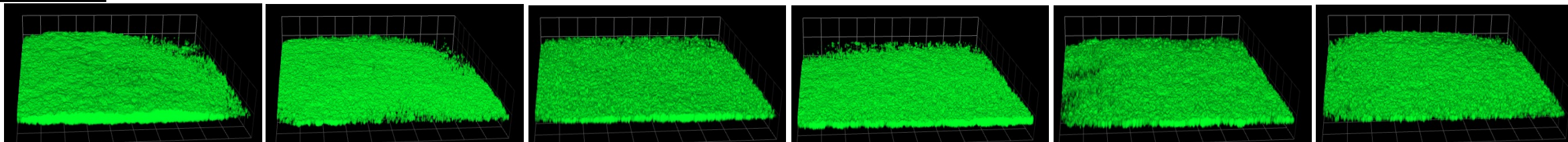


PAE010 – LB

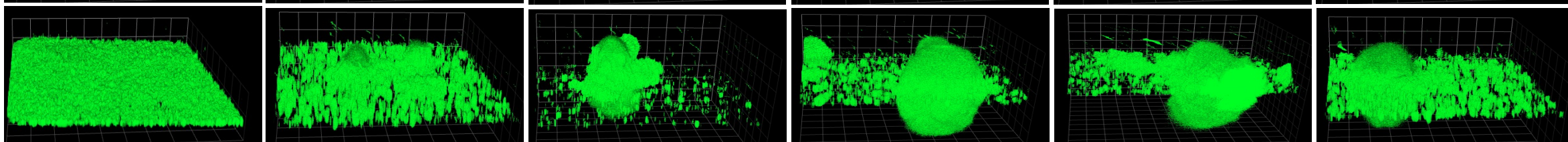
20X Objective

1 Unit = 24.82  $\mu\text{m}$

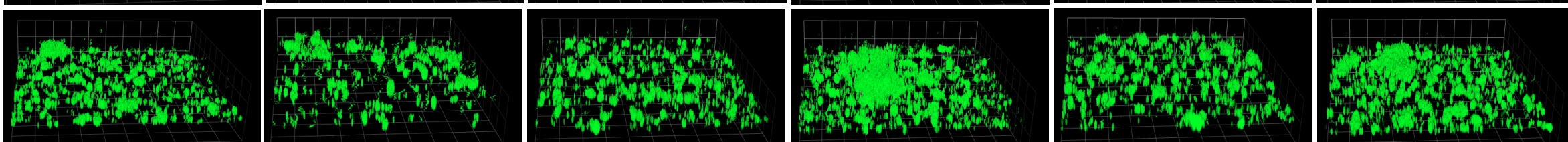
Trial 1



Trial 2

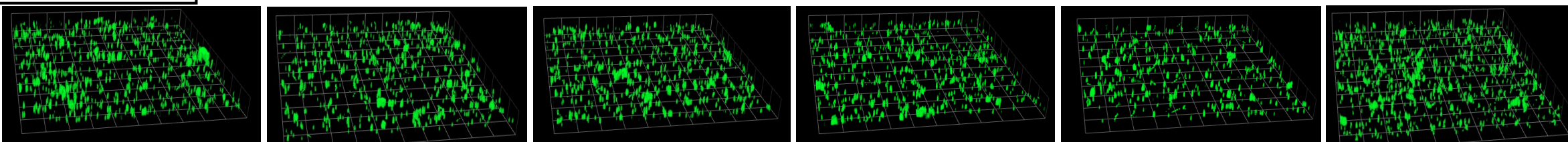


Trial 3

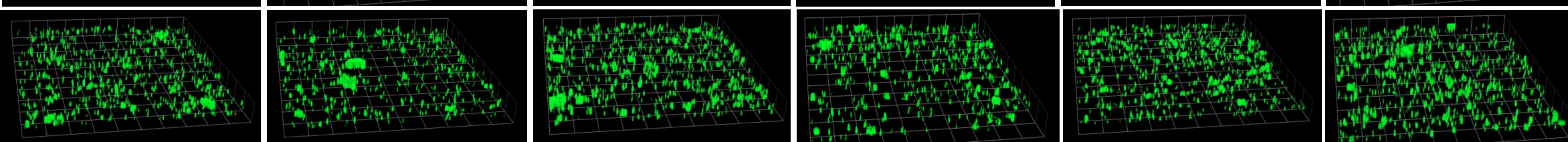


PAE010 – LB + 5% SS

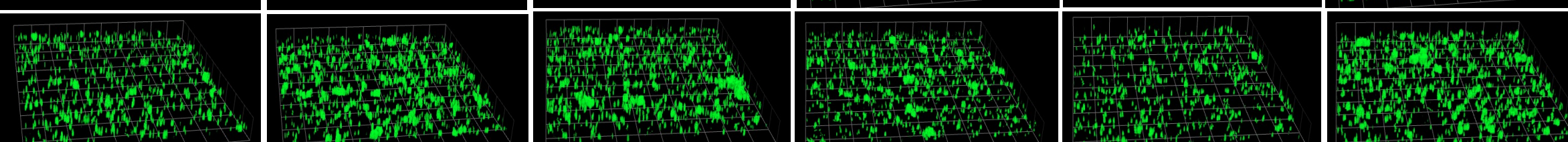
Trial 1



Trial 2

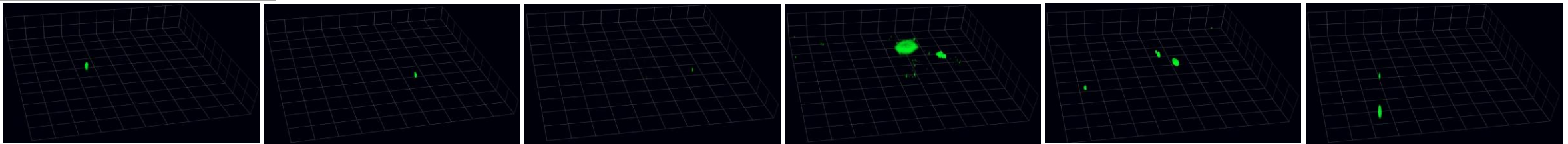


Trial 3

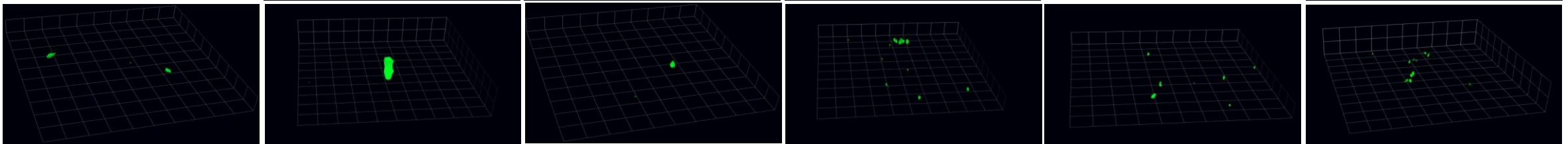




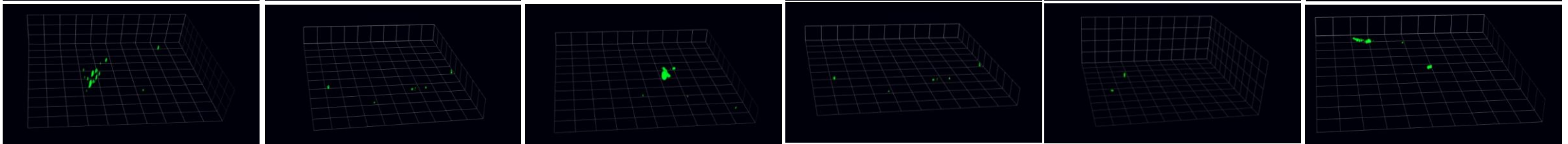
Trial 1



Trial 2



Trial 3



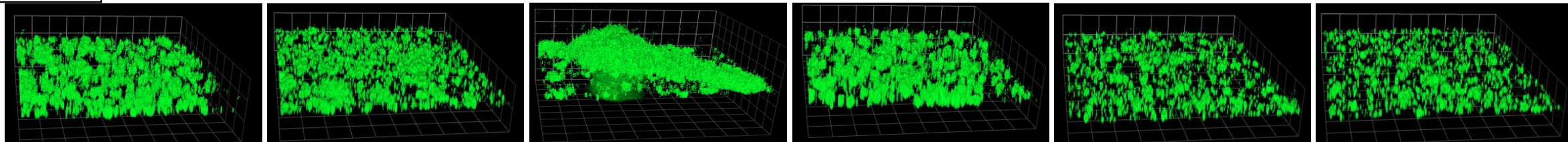


PAE011 – LB

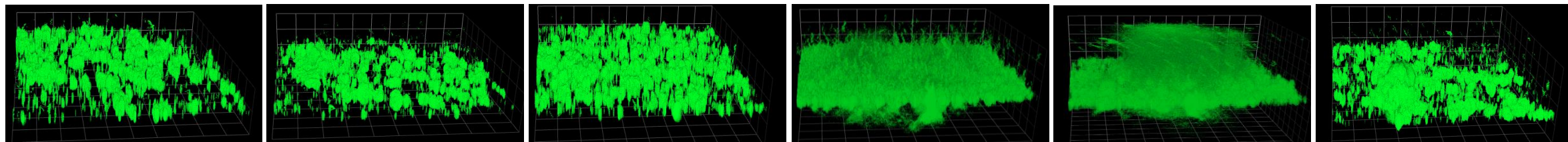
20X Objective

1 Unit = 24.82  $\mu\text{m}$

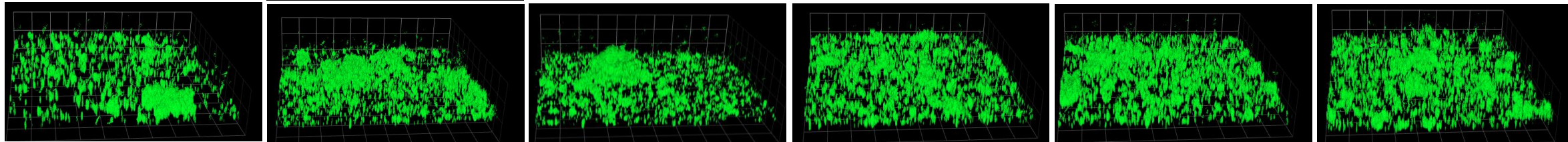
Trial 1



Trial 2

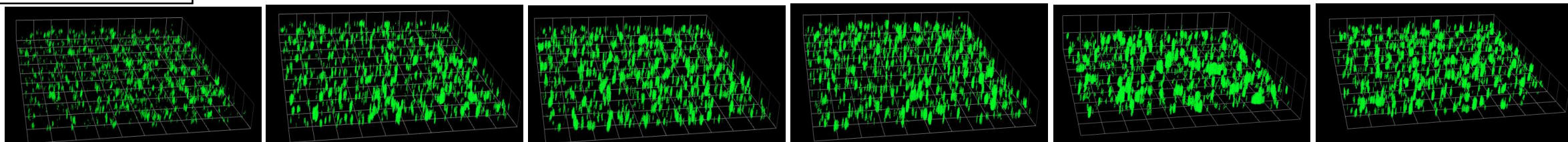


Trial 3

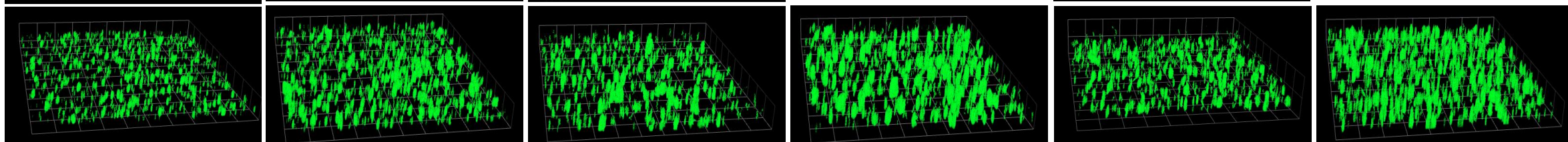


PAE011 – LB + 5% SS

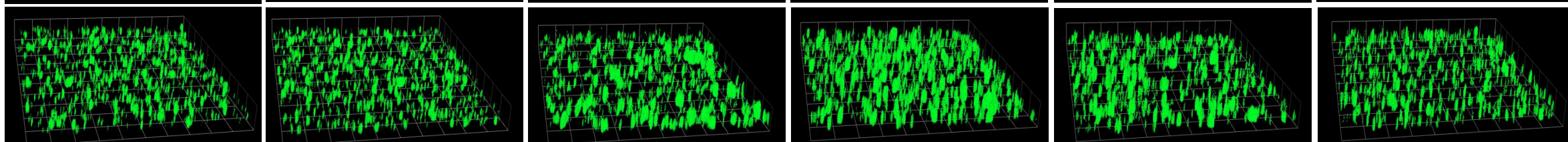
Trial 1



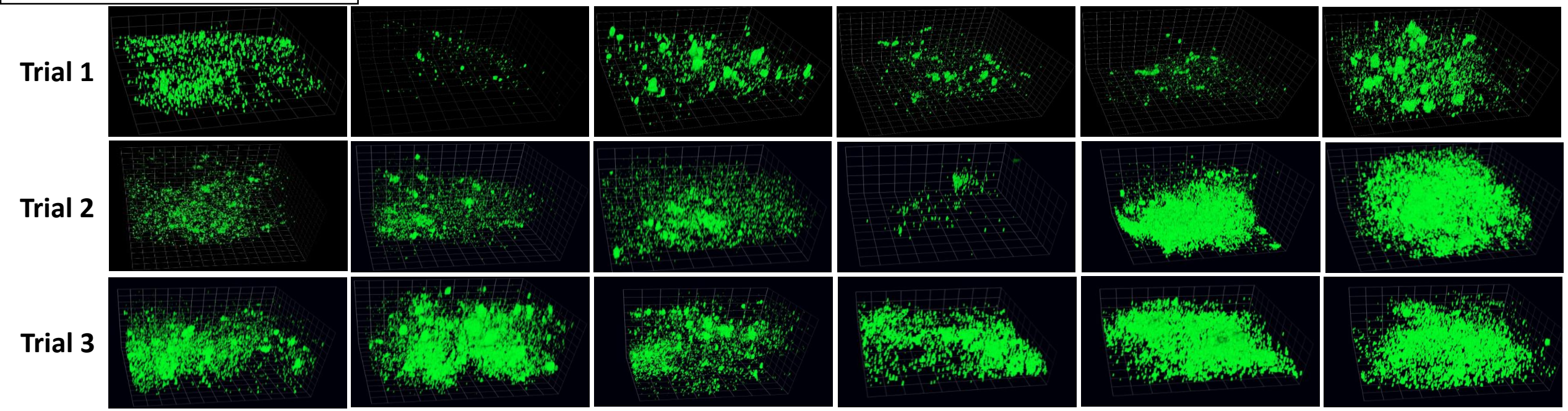
Trial 2



Trial 3







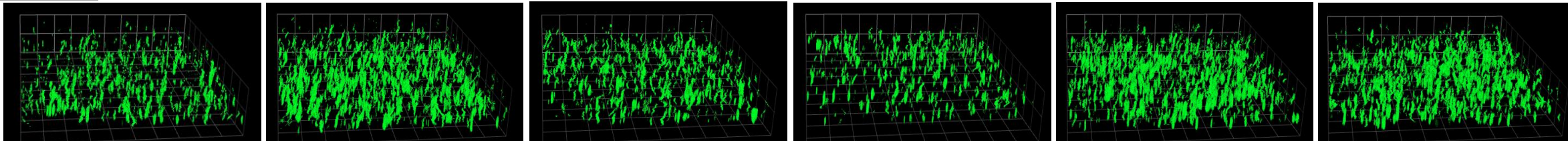


PAE012 – LB

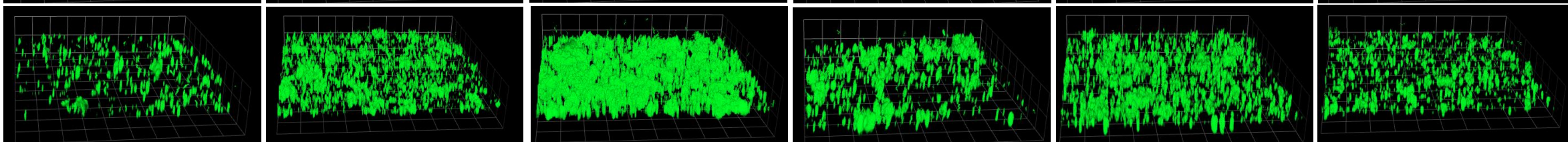
20X Objective

1 Unit = 24.82  $\mu\text{m}$

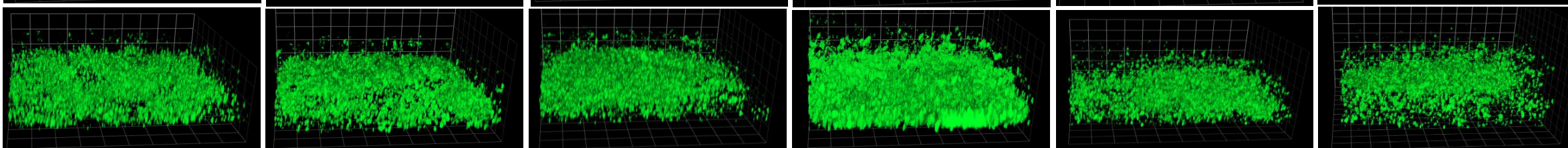
Trial 1



Trial 2

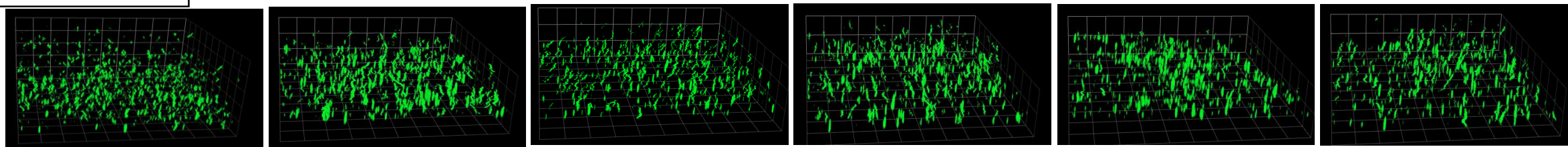


Trial 3

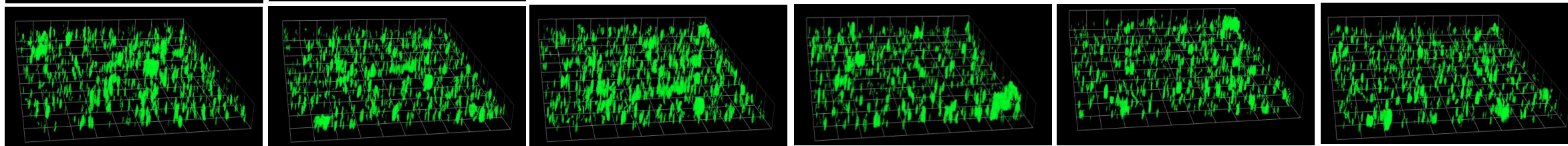


PAE012 – LB + 5% SS

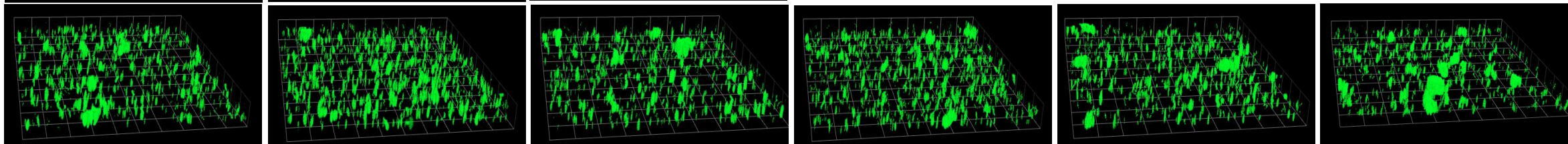
Trial 1



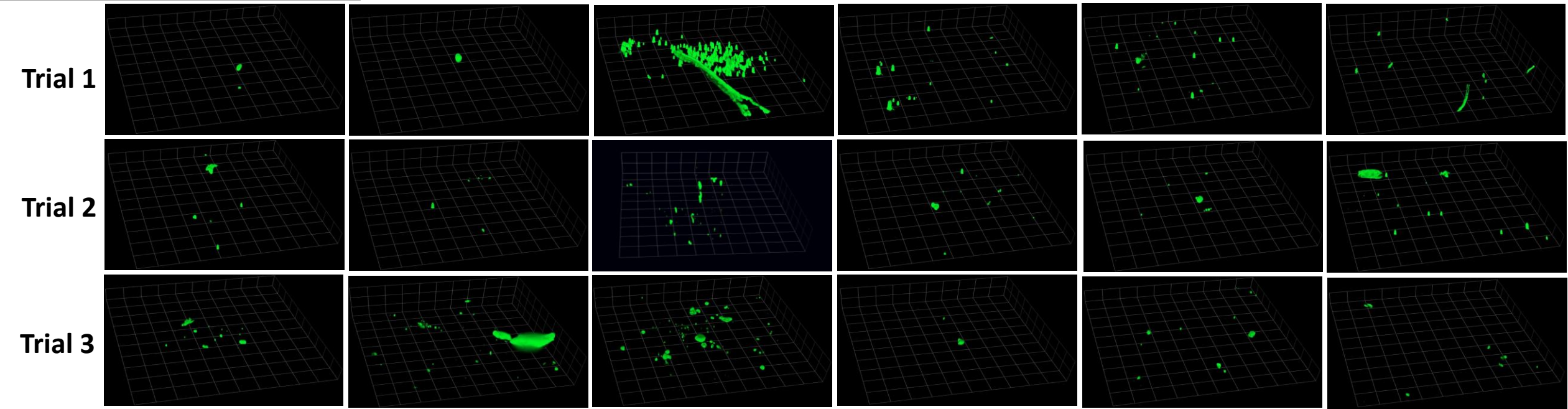
Trial 2



Trial 3









# Supplementary Figure S2

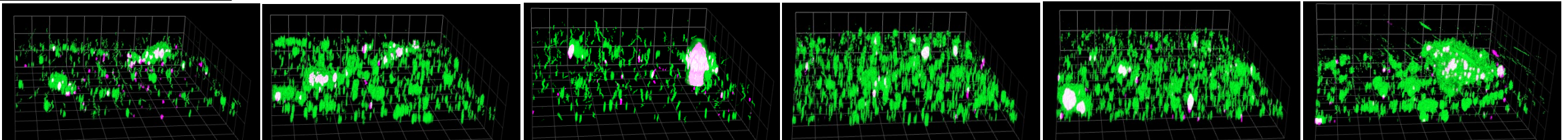
CLSM representative images of the 11 sputum hydrogels and corresponding 11 PA isolates grown *in vitro* as biofilms in LB alone. The FISH PseaerA (green) probe and the SYTO9 (green) fluorescent nucleic acid stain were used to visualize PA in the sputum hydrogels and the chamber wells, respectively. The fluorescently labelled anti-Psl mAb, Psl0096 (magenta) was used to visualize Psl in both bioassays.



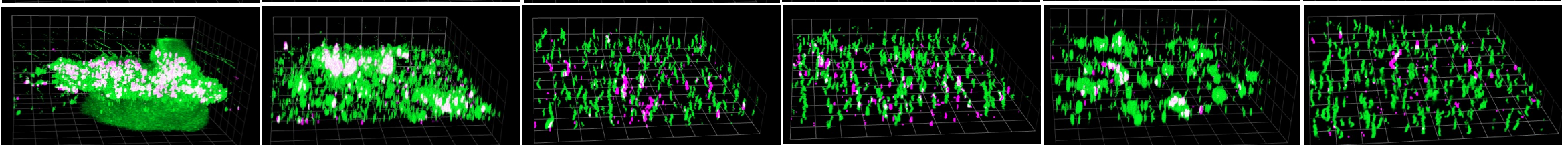
PAE001 – LB + psl0096

1 Unit = 24.82  $\mu\text{m}$

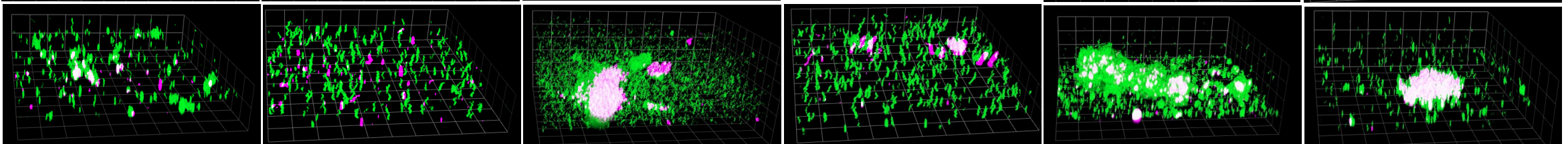
Trial 1



Trial 2

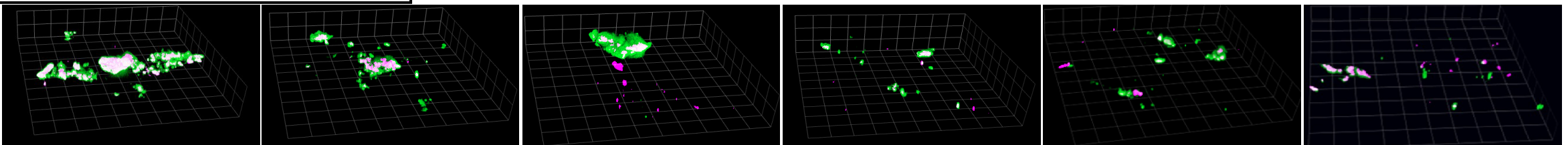


Trial 3

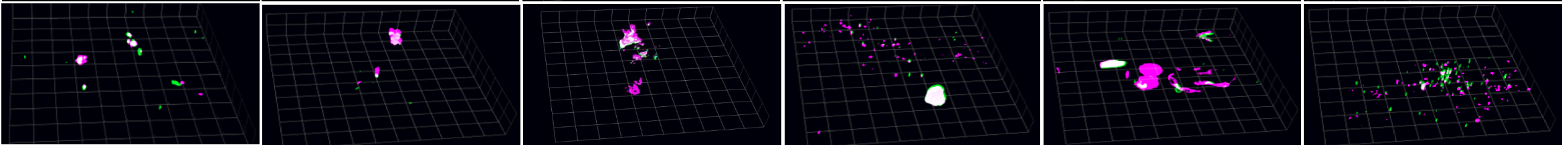


PAE001 – Sputum hydrogel + psl0096

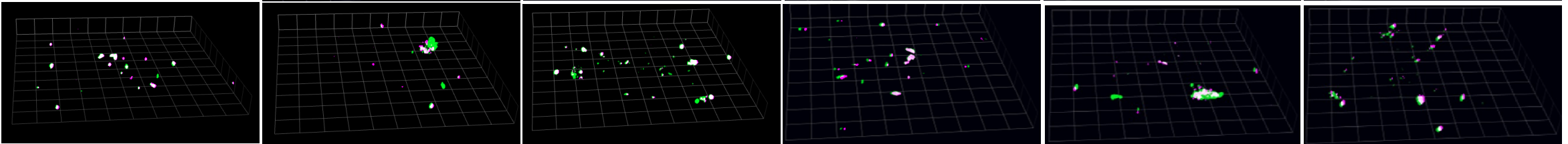
Trial 1



Trial 2



Trial 3

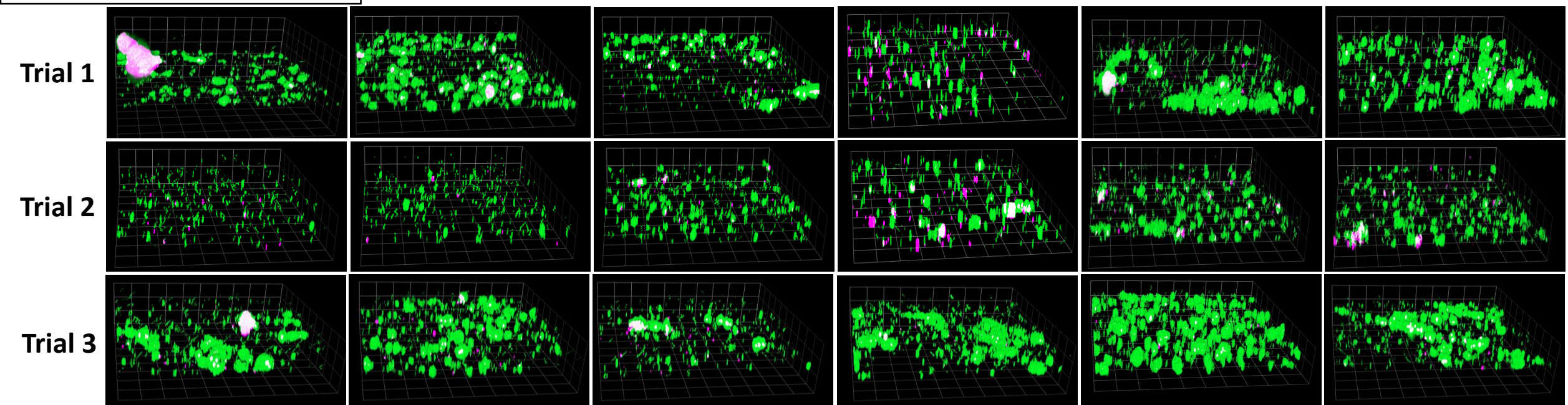




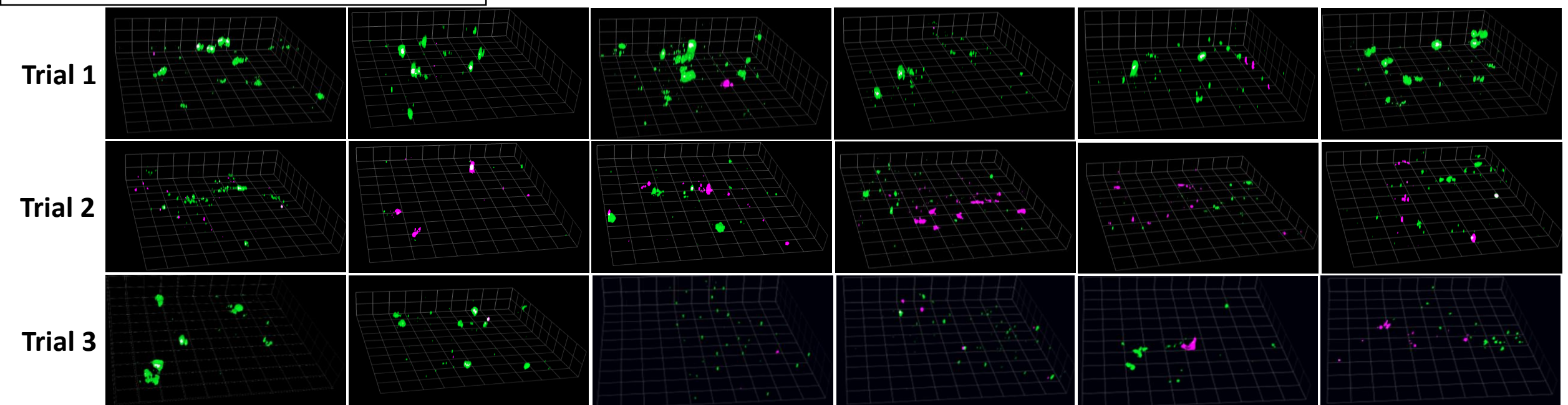
PAE002 – LB + psl0096

20X Objective

1 Unit = 24.82  $\mu\text{m}$



PAE002 – Sputum hydrogel + psl0096

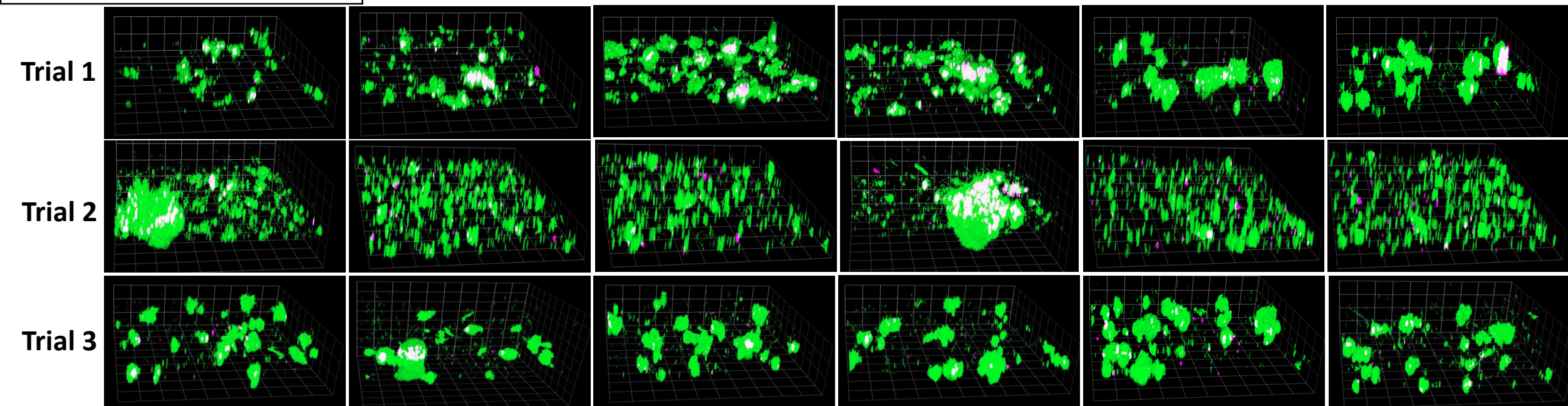




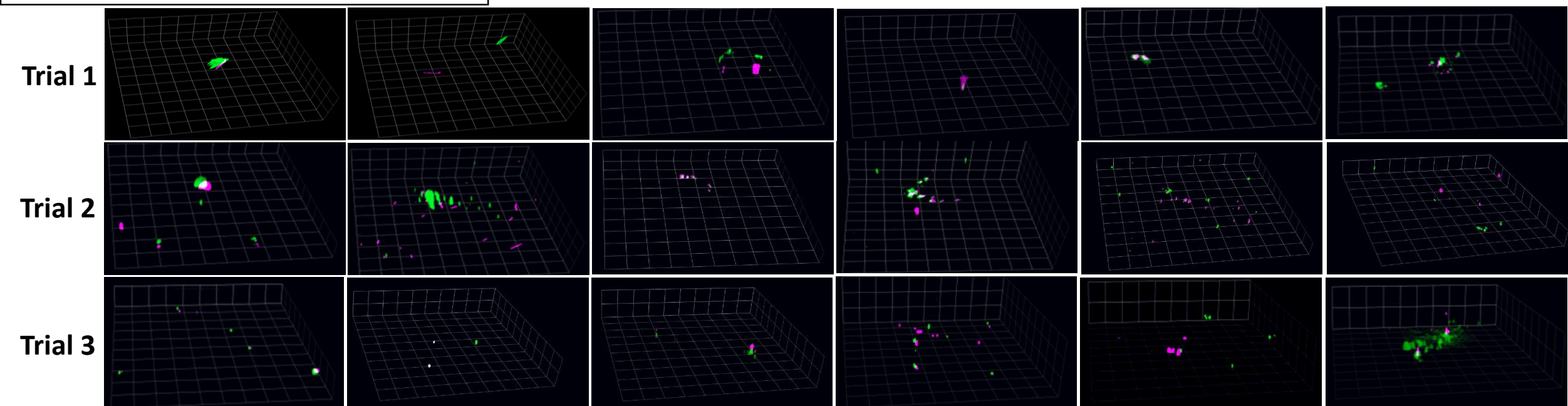
PAE003 – LB + psl0096

20X Objective

1 Unit = 24.82  $\mu$ m



PAE003 – Sputum hydrogel + psl0096



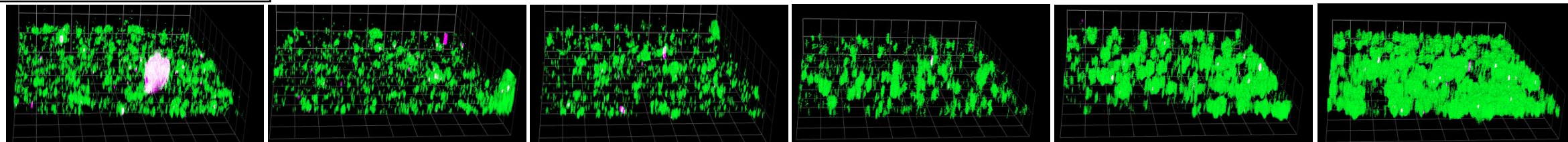


PAE004 – LB + psl0096

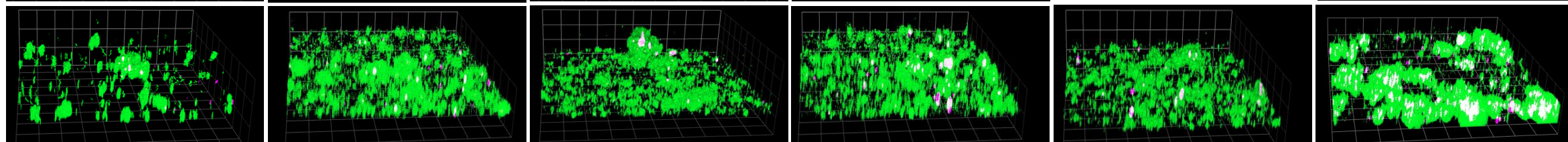
20X Objective

1 Unit = 24.82  $\mu$ m

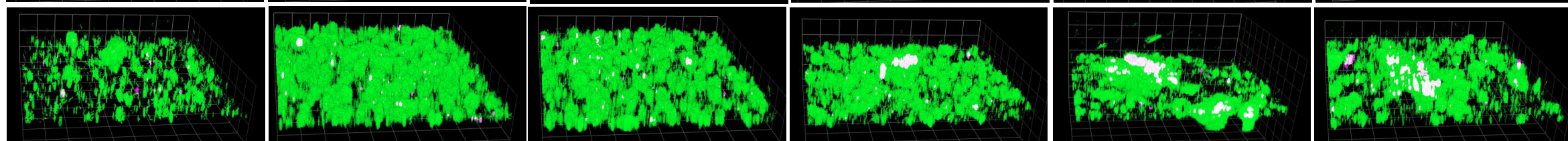
Trial 1



Trial 2

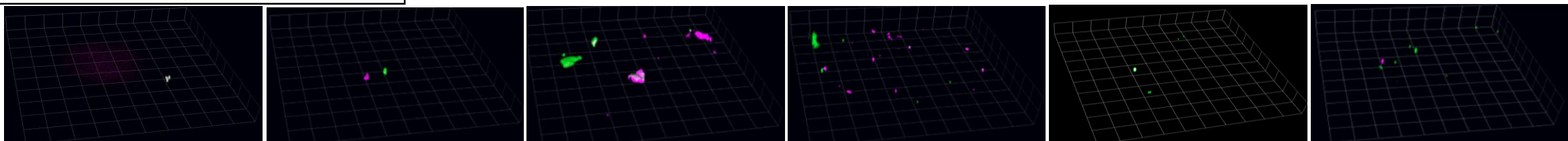


Trial 3

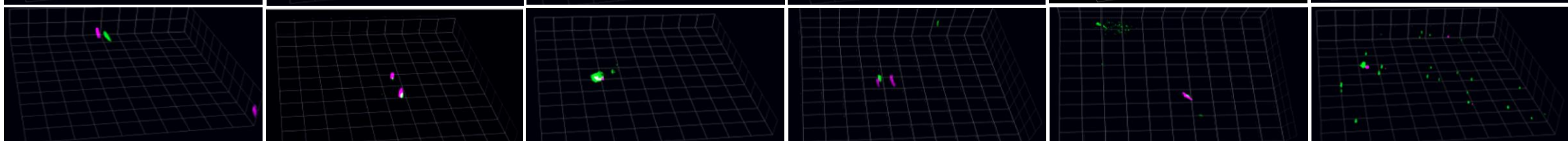


PAE004 – Sputum hydrogel + psl0096

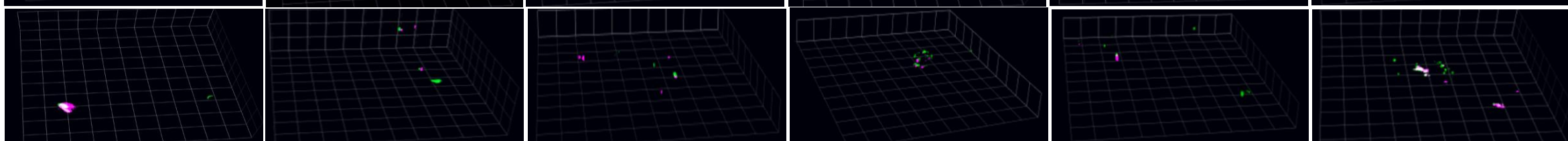
Trial 1



Trial 2



Trial 3

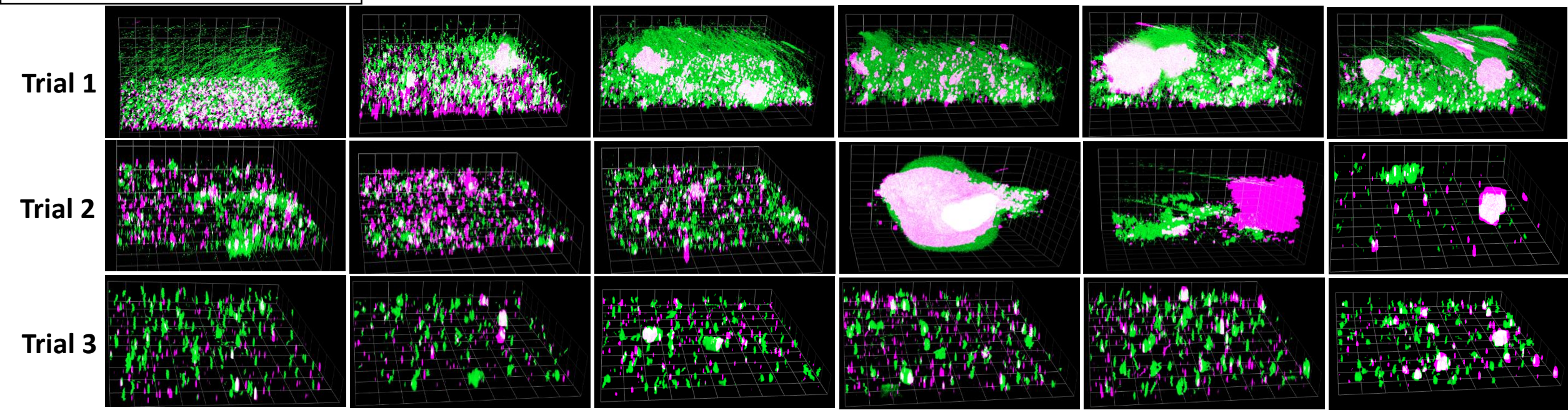




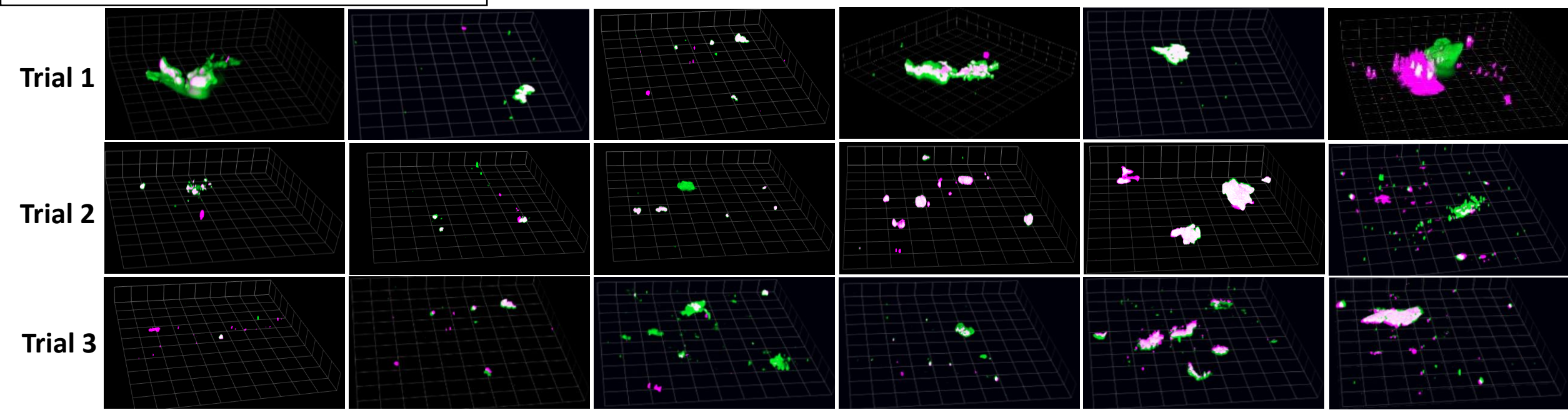
PAE005 – LB + psl0096

20X Objective

1 Unit = 24.82  $\mu$ m



PAE005 – Sputum hydrogel + psl0096





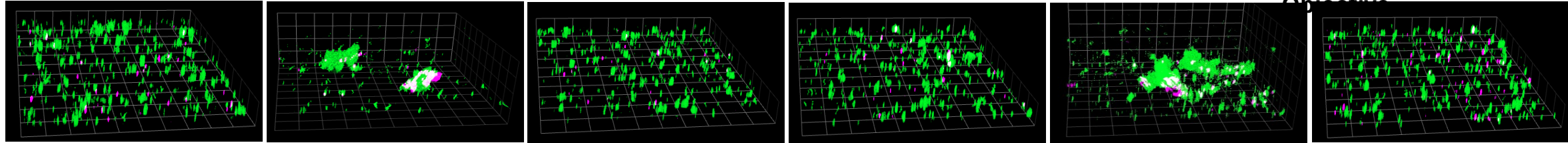
PAE006 – LB + psl0096

20X

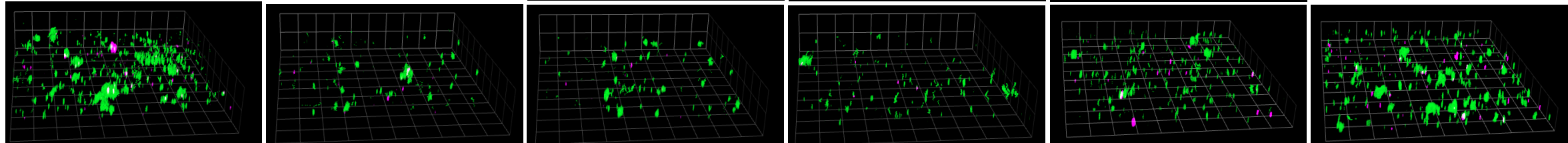
1 Unit = 24.82  $\mu\text{m}$

Objective

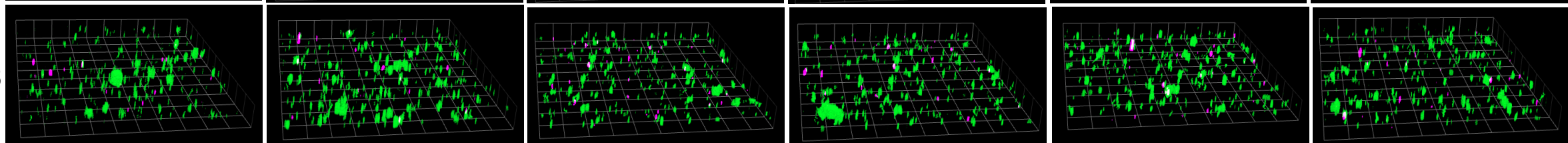
Trial 1



Trial 2

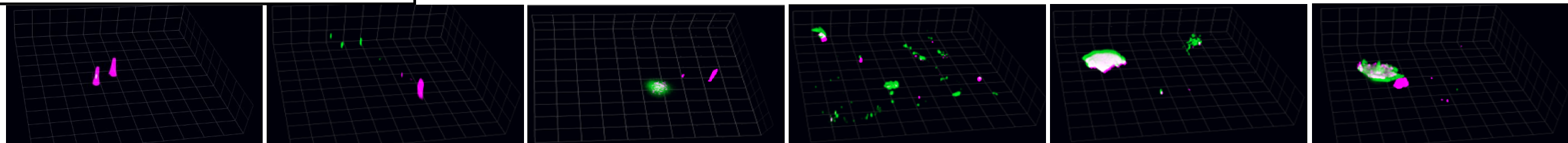


Trial 3

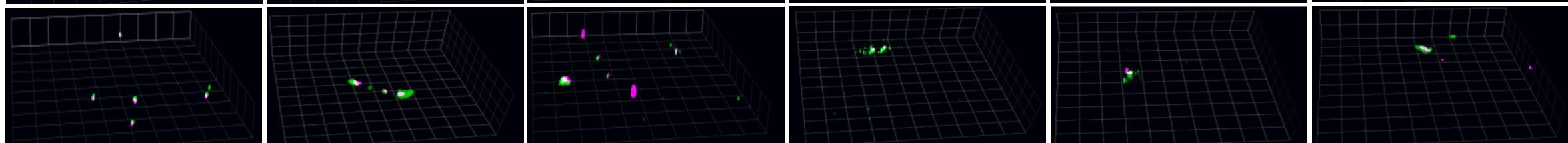


PAE006 – Sputum hydrogel + psl0096

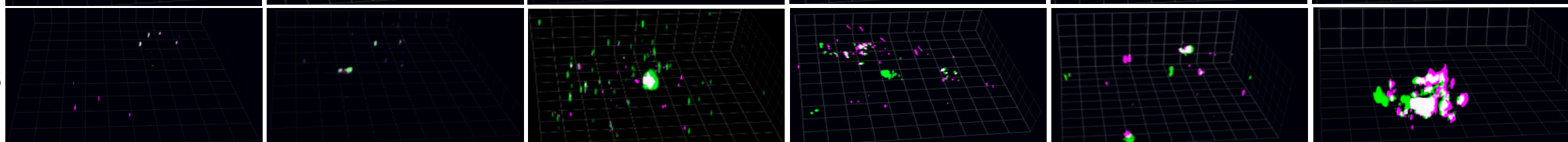
Trial 1



Trial 2



Trial 3



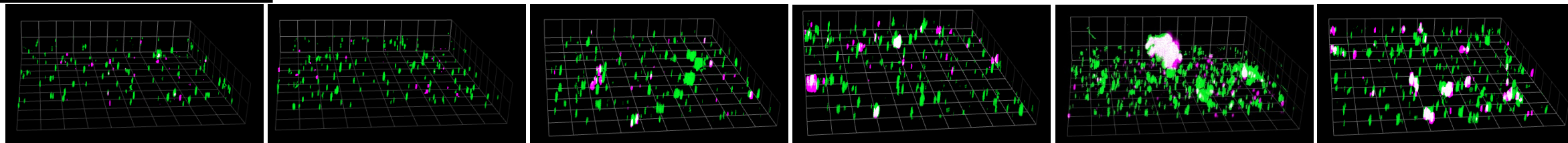


PAE007 – LB + psl0096

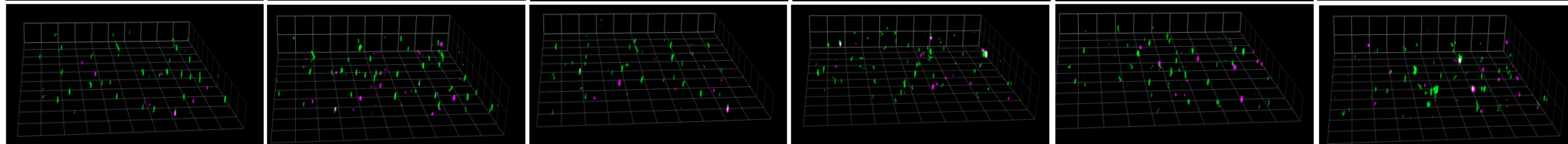
20X Objective

1 Unit = 24.82  $\mu$ m

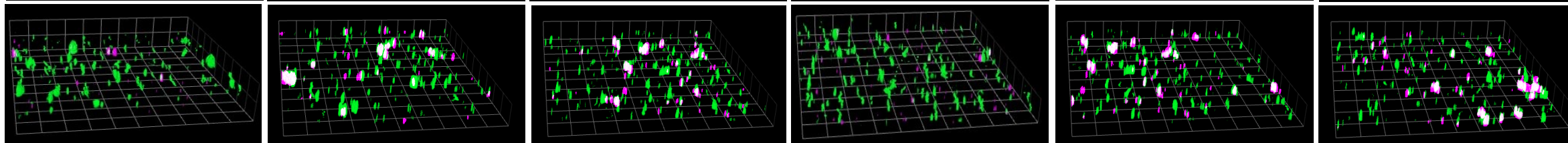
Trial 1



Trial 2

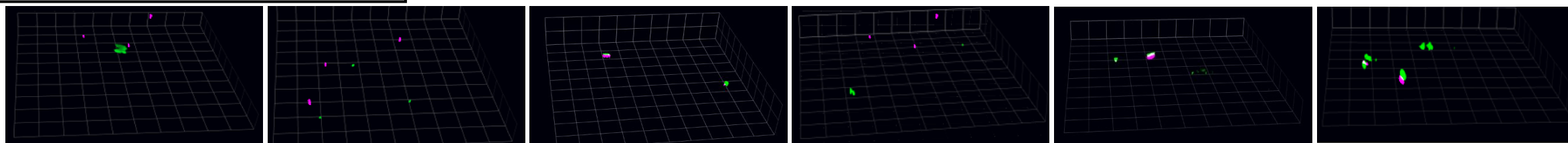


Trial 3

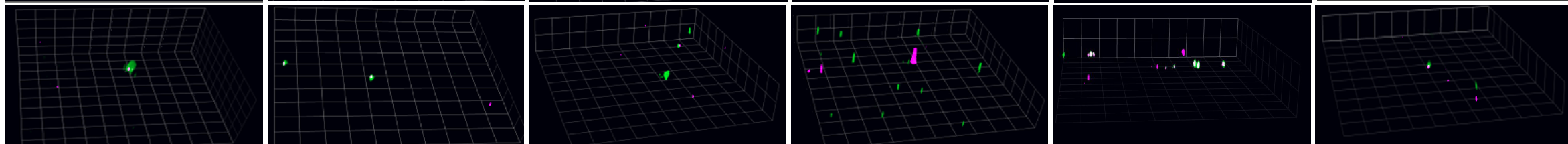


PAE007 – Sputum hydrogel + psl0096

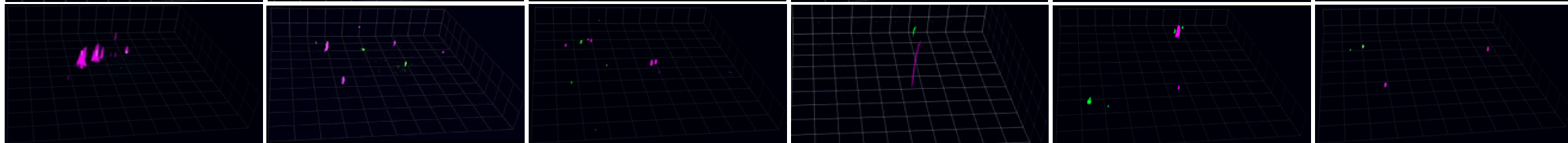
Trial 1



Trial 2



Trial 3



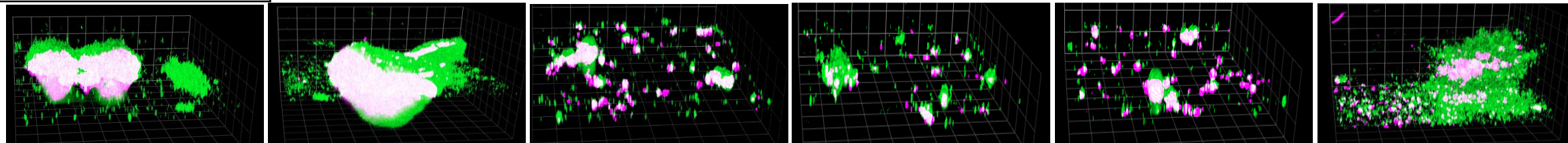


PAE008 – LB + psl0096

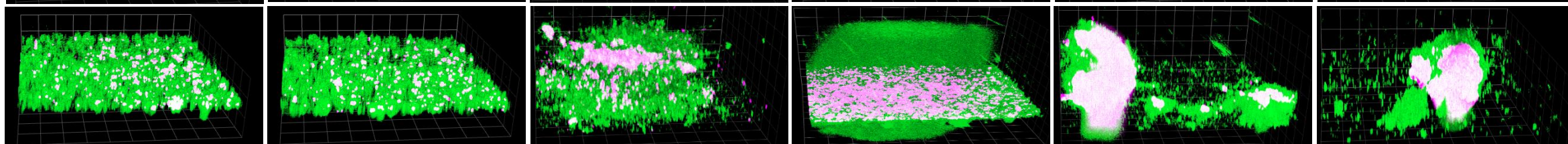
20X Objective

1 Unit = 24.82  $\mu$ m

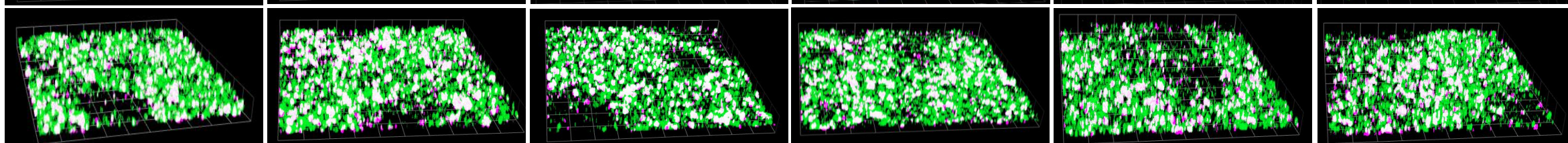
Trial 1



Trial 2

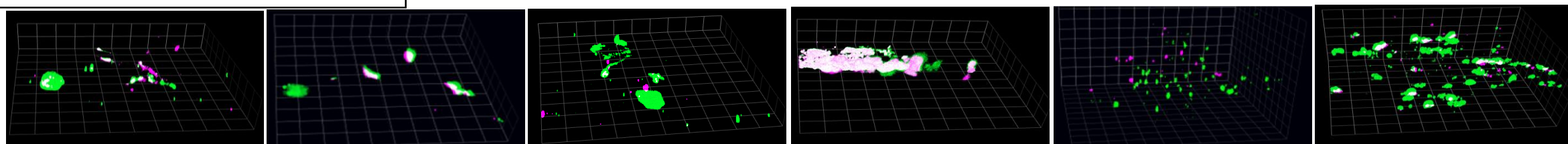


Trial 3

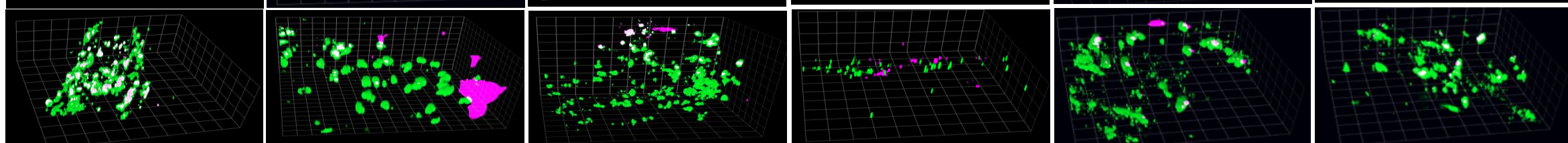


PAE008 – Sputum hydrogel + psl0096

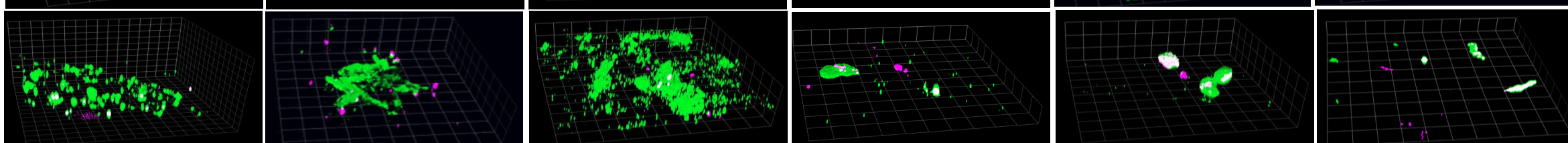
Trial 1



Trial 2



Trial 3

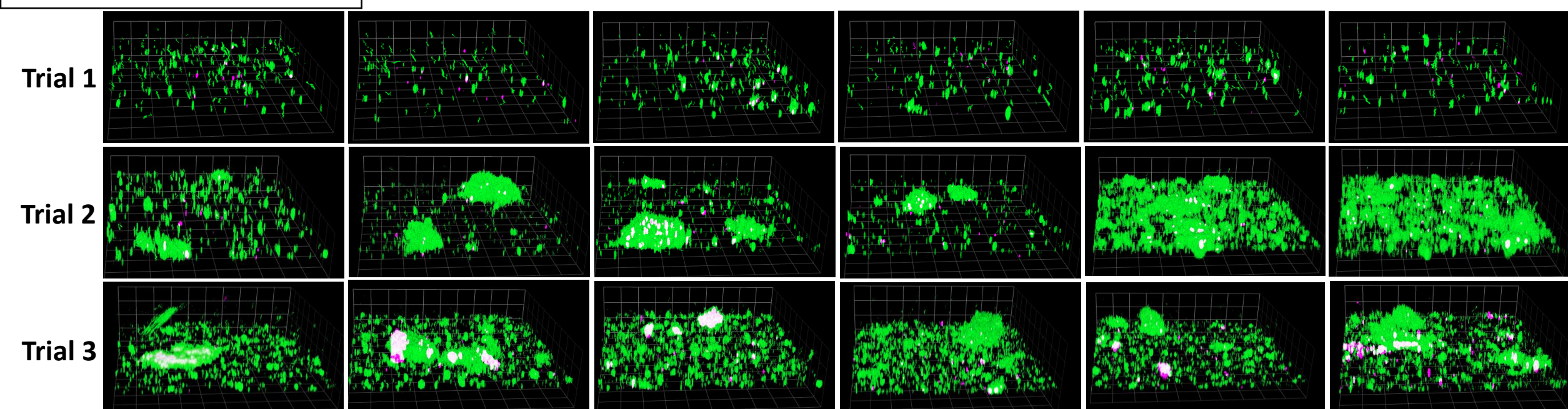




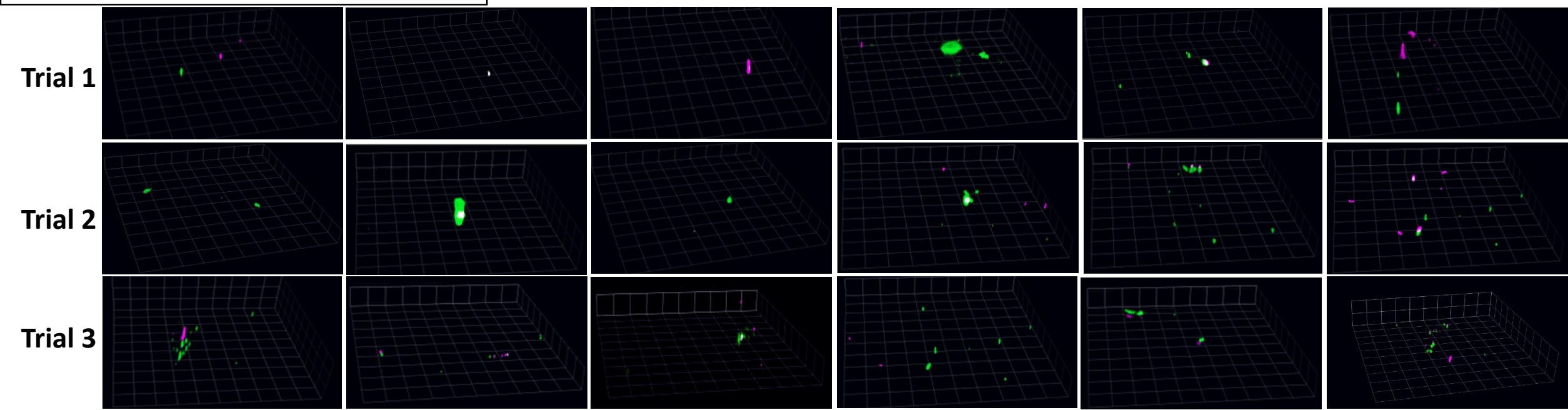
PAE010 – LB + psl0096

20X Objective

1 Unit = 24.82  $\mu\text{m}$



PAE010 – Sputum hydrogel + psl0096



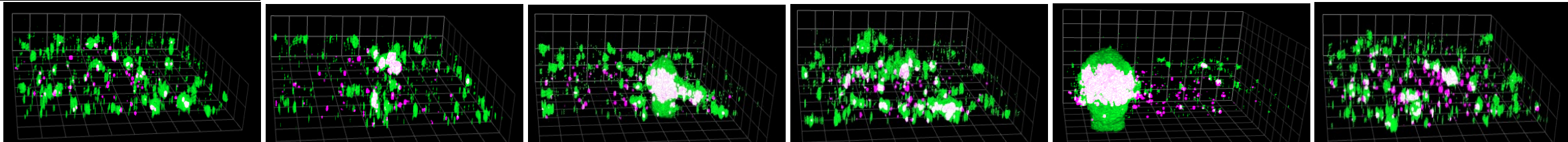


PAE011 – LB + psl0096

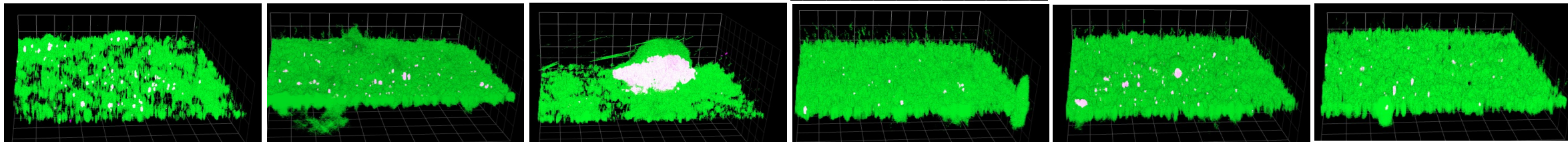
20X Objective

1 Unit = 24.82  $\mu$ m

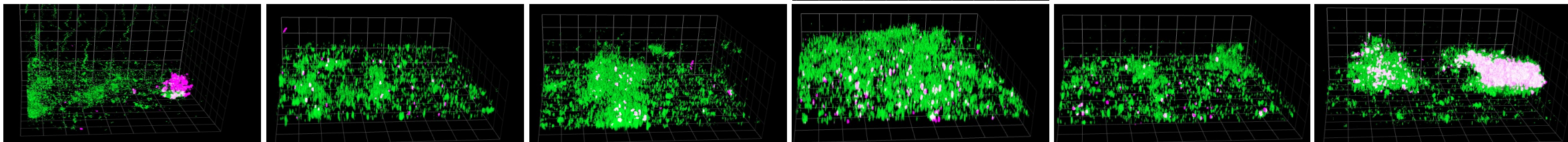
Trial 1



Trial 2

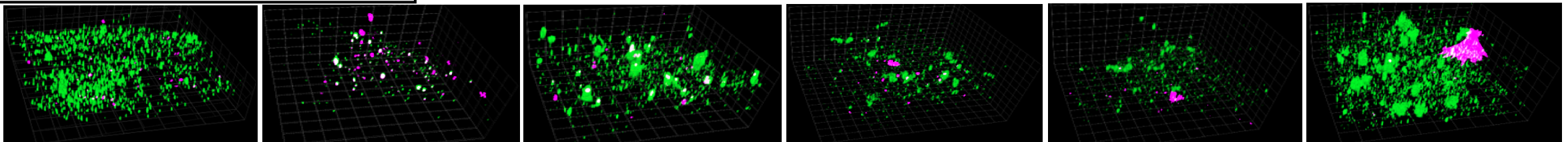


Trial 3

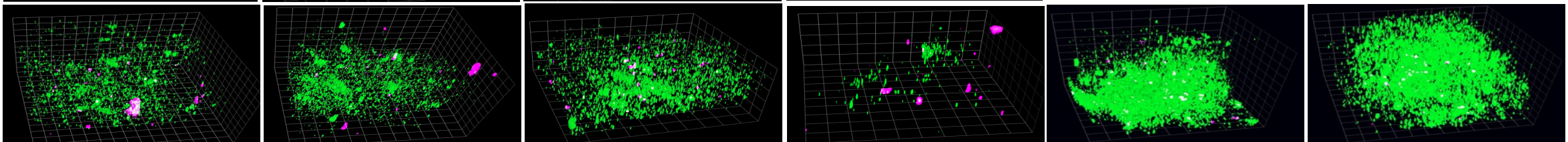


PAE011 – Sputum hydrogel + psl0096

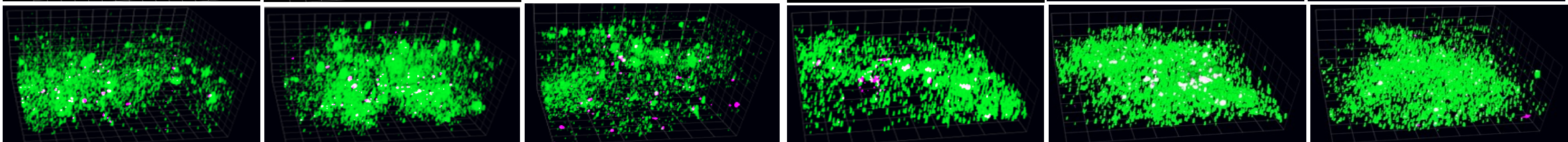
Trial 1



Trial 2



Trial 3

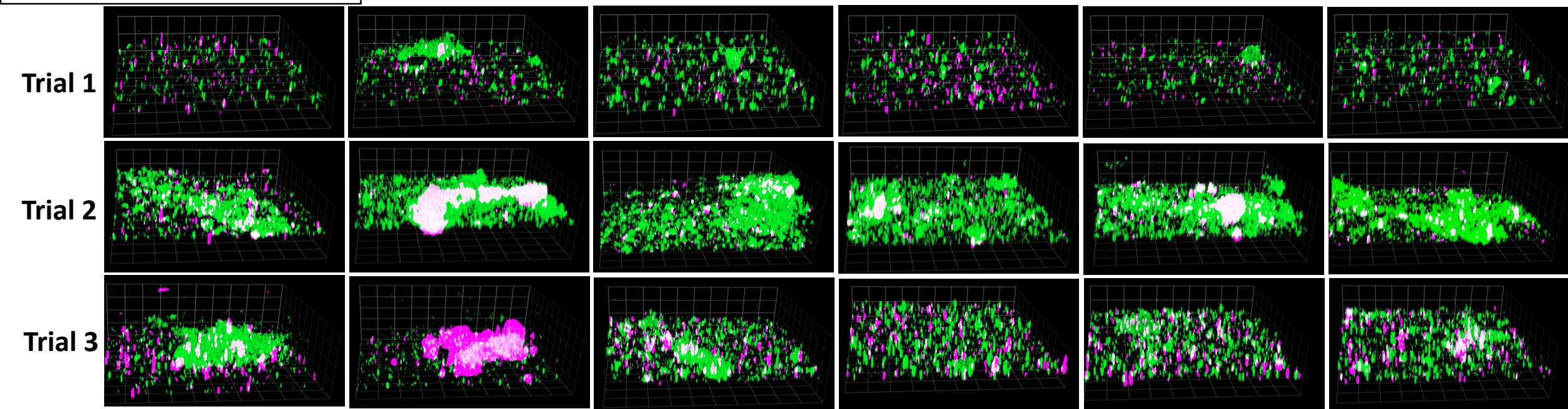




PAE012 – LB + psl0096

20X Objective

1 Unit = 24.82  $\mu\text{m}$



PAE012 – Sputum hydrogel + psl0096

