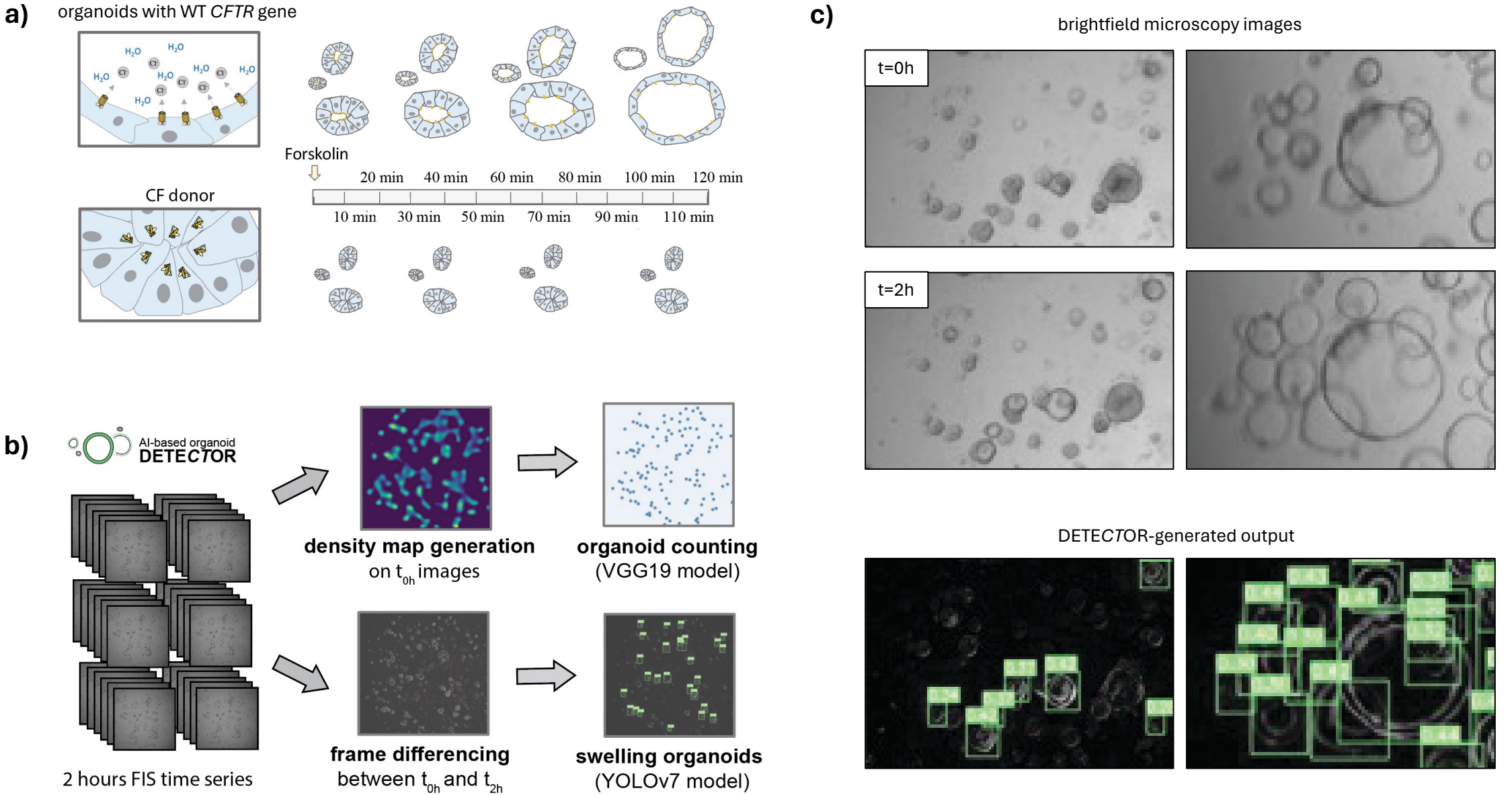
a)
organoids with WT CFTR gene
CF donor
Forskolin
20 min
40 min
60 min
80 min
100 min
120 min
10 min
30 min
50 min
70 min
90 min
110 min
b)
AI-based organoid
DETECTOR
2 hours FIS time series
density map generation
on t0h images
organoid counting
(VGG19 model)
frame differencing
between t0h and t2h
swelling organoids
(YOLOv7 model)
c)
brightfield microscopy images
t=0h
t=2h
DETECTOR-generated output