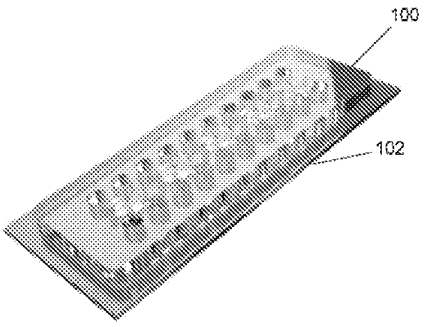


FIG. 1A

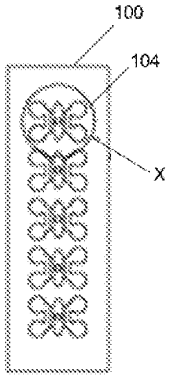


FIG. 1B

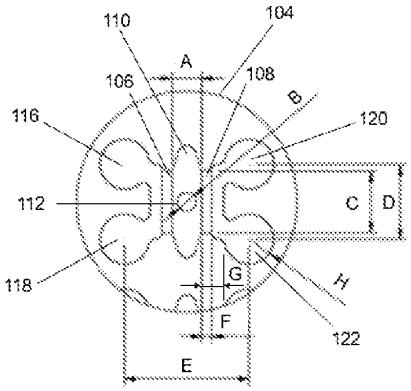


FIG. 1C

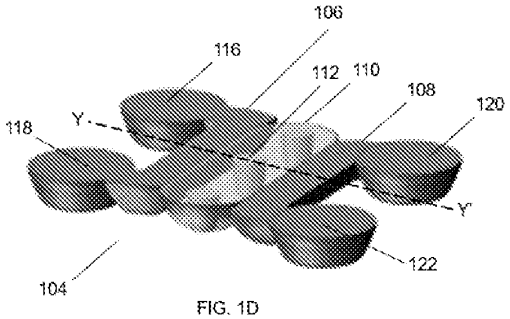


FIG. 1D

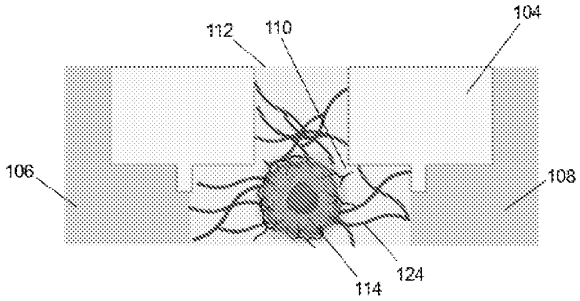


FIG. 1E

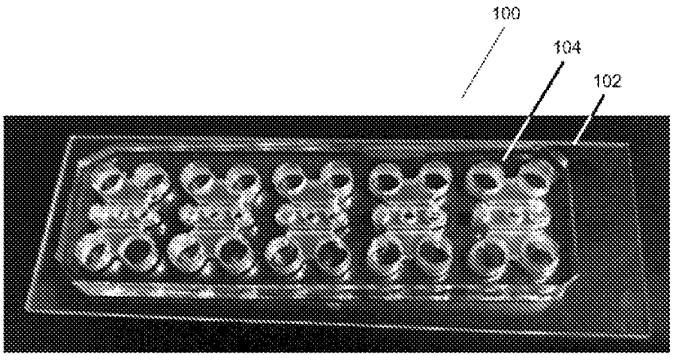


FIG. 1F

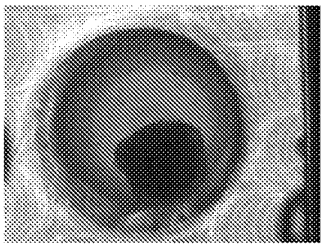

FIG. 1G

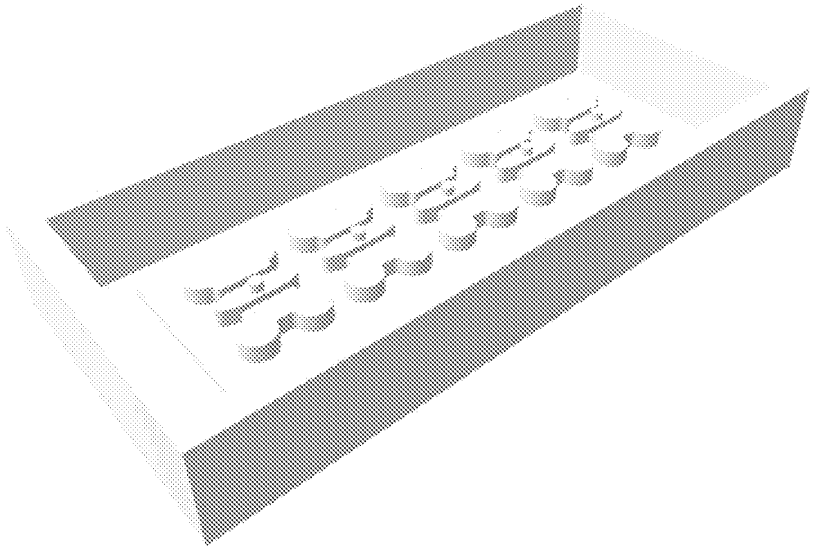

FIG. 2

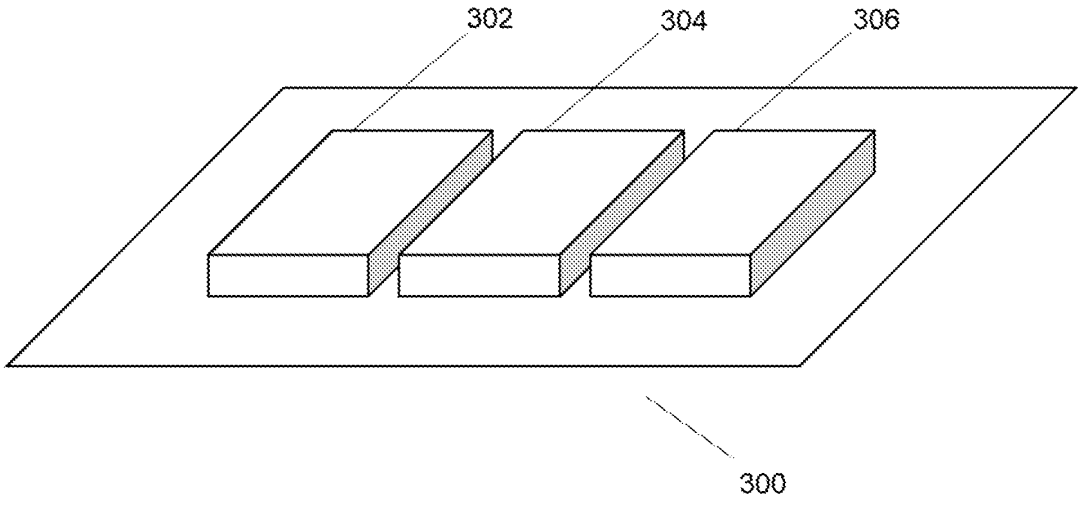


FIG. 3

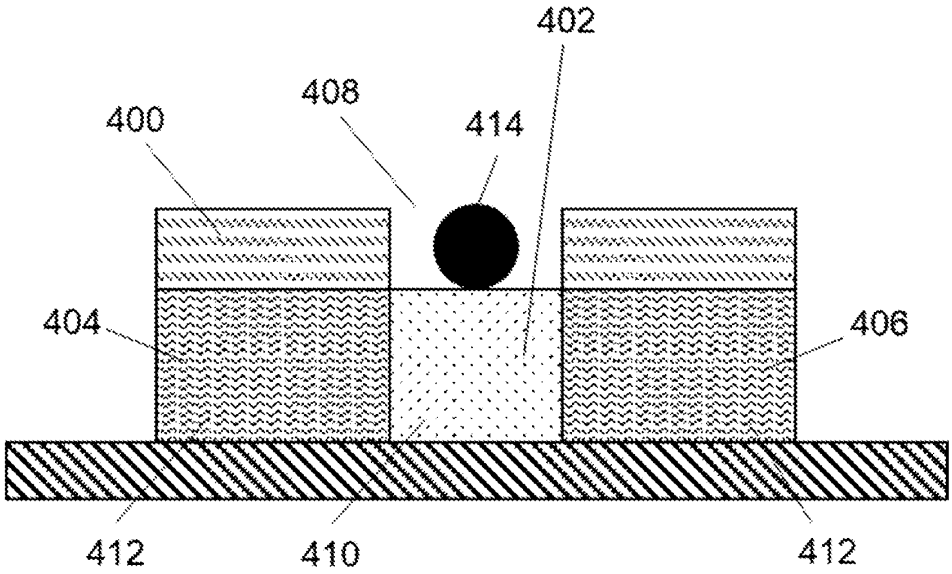
402
408
400
414
404
406
412
410
412

FIG. 4A

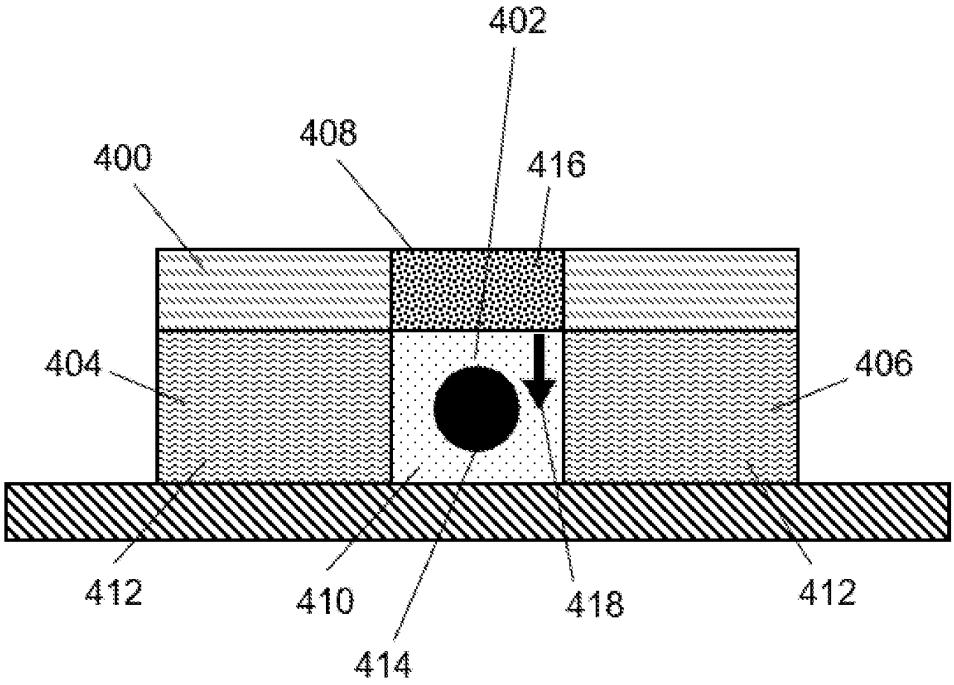
402
408
400
416
404
406
412
410
418
412
414

FIG. 4B

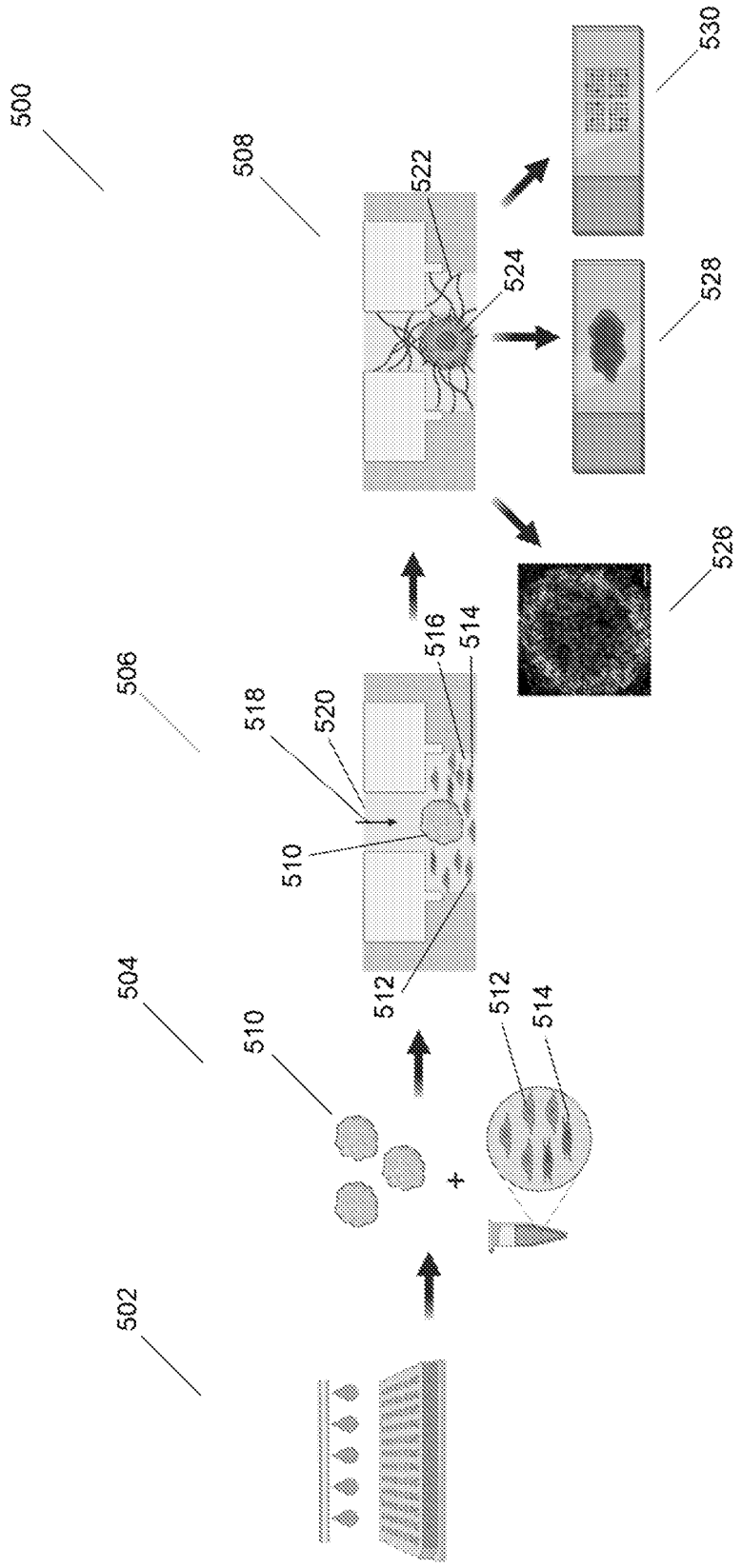


FIG. 5

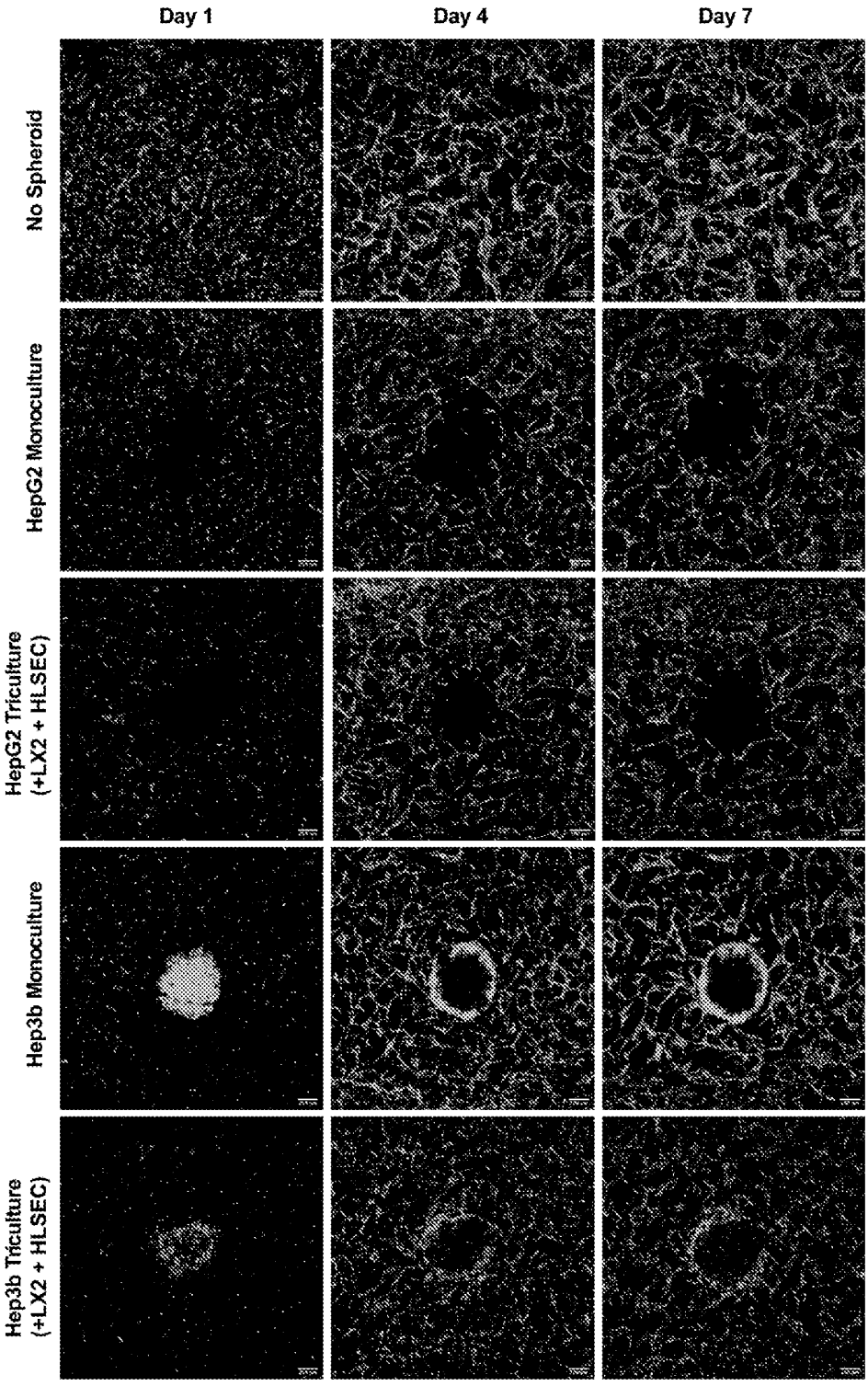
Day 1
Day 4
Day 7
No Spheroid
HepG2 Monoculture
HepG2 Triculture (+LX2 + HLSEC)
Hep3b Monoculture
Hep3b Triculture (+LX2 + HLSEC)

FIG. 6A

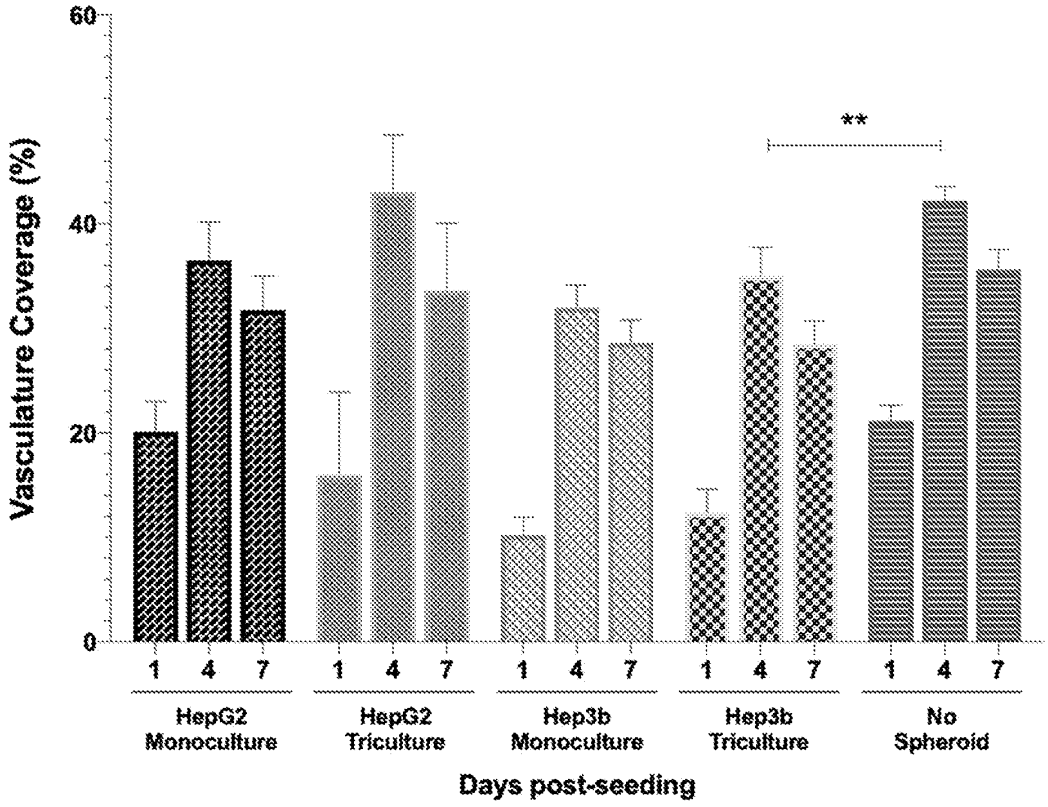
60
40
20
0
Vasculature Coverage (%)
**
1 4 7
HepG2 Monoculture
HepG2 Triculture
Hep3b Monoculture
Hep3b Triculture
No Spheroid
Days post-seeding

FIG. 6B

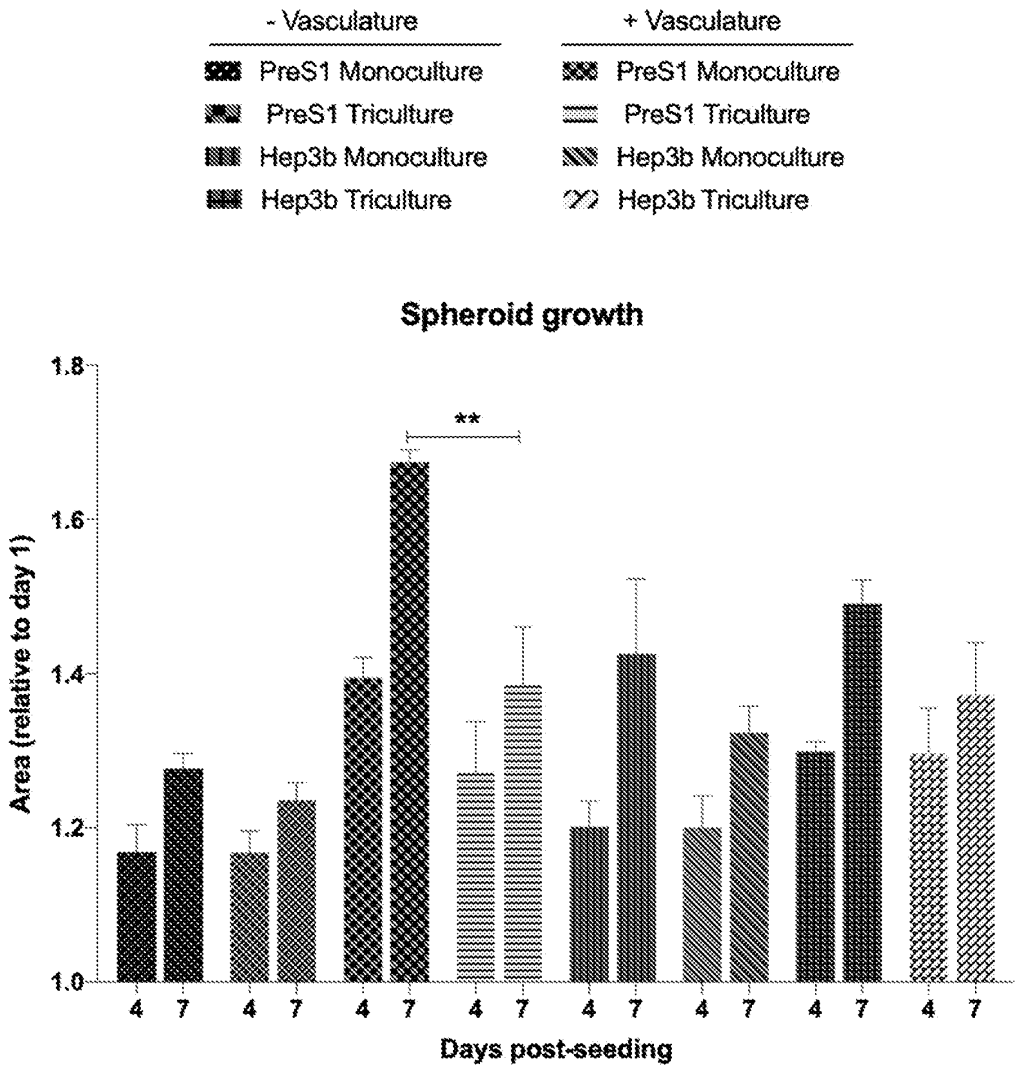
- Vasculature
PreS1 Monoculture
PreS1 Triculture
Hep3b Monoculture
Hep3b Triculture
+ Vasculature
PreS1 Monoculture
PreS1 Triculture
Hep3b Monoculture
Hep3b Triculture
Spheroid growth
Area (relative to day 1)
1.8
1.6
1.4
1.2
1.0
**
4 7 4 7 4 7 4 7 4 7 4 7 4 7 4 7
Days post-seeding

FIG. 7A

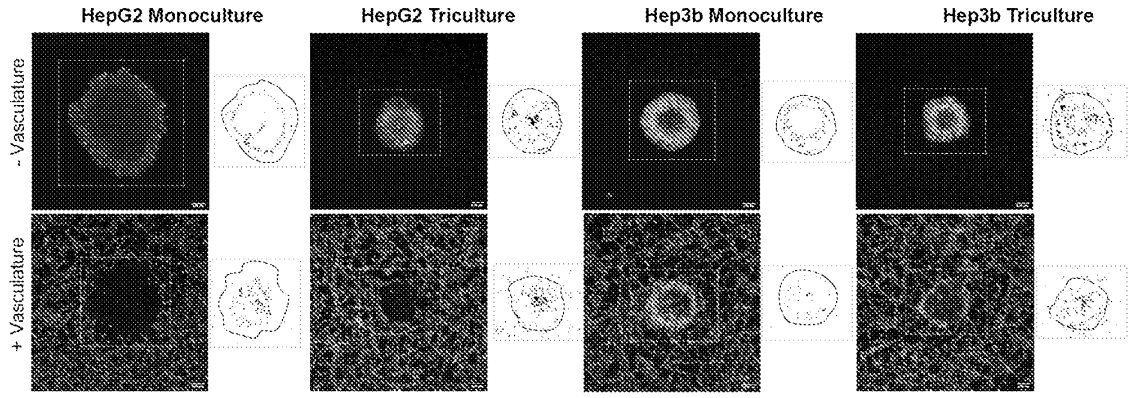
HepG2 Monoculture
HepG2 Triculture
Hep3b Monoculture
Hep3b Triculture
- Vasculature
+ Vasculature

FIG. 7B

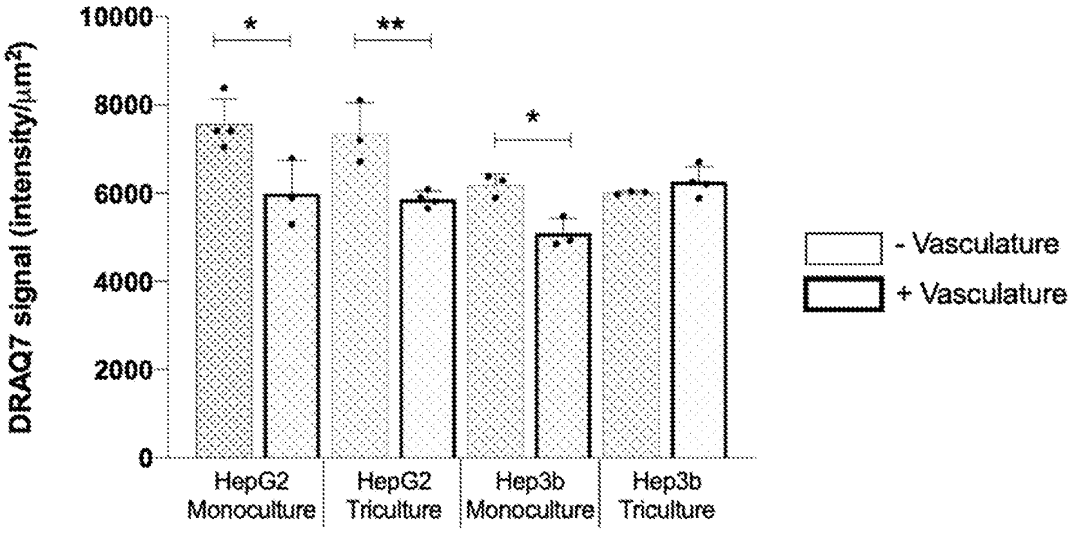
DRAQ7 signal (intensity/μm²)
10000
8000
6000
4000
2000
0
*
**
*
HepG2 Monoculture
HepG2 Triculture
Hep3b Monoculture
Hep3b Triculture
- Vasculature
+ Vasculature

FIG. 7C

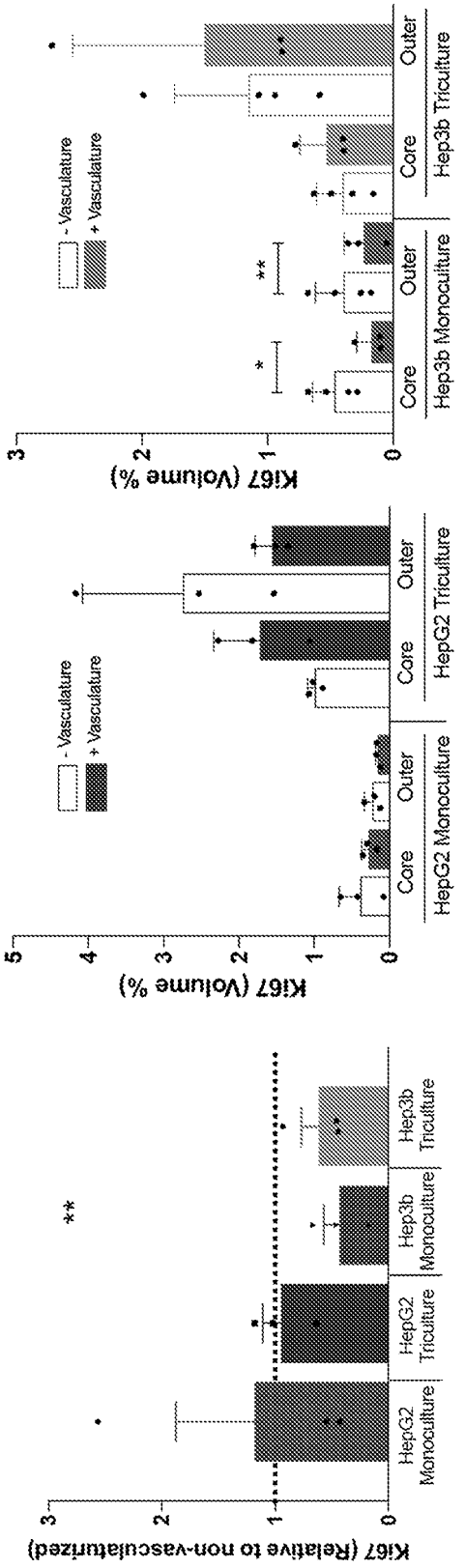


FIG. 7D

FIG. 7E

FIG. 7F

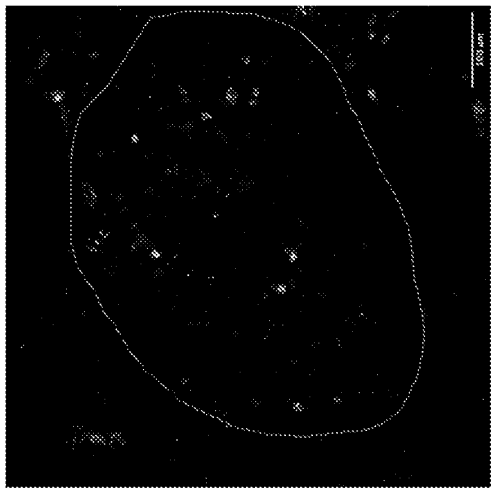

FIG. 7G

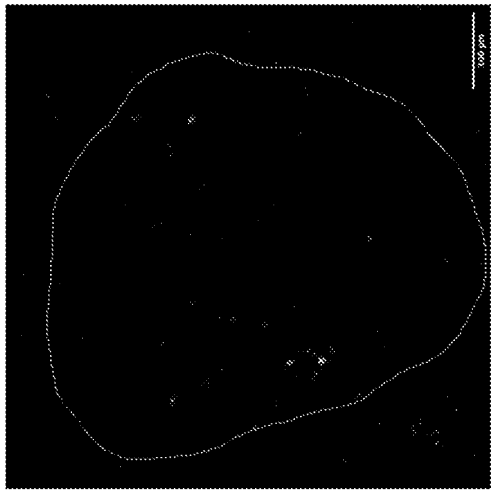

FIG. 7H

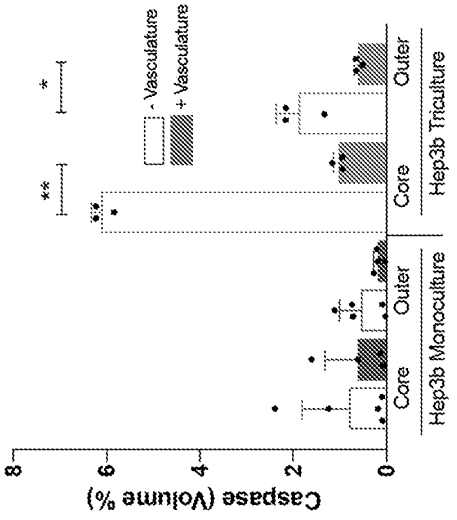


FIG. 7K

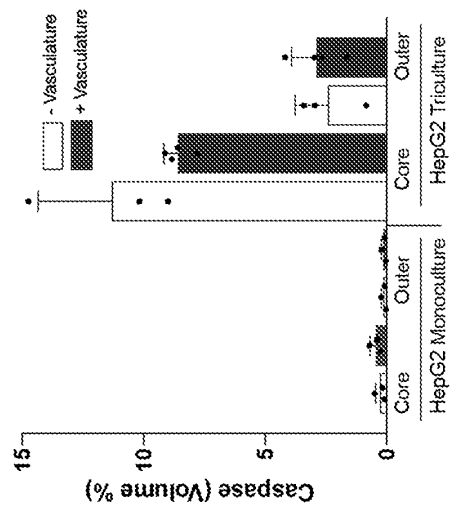


FIG. 7J

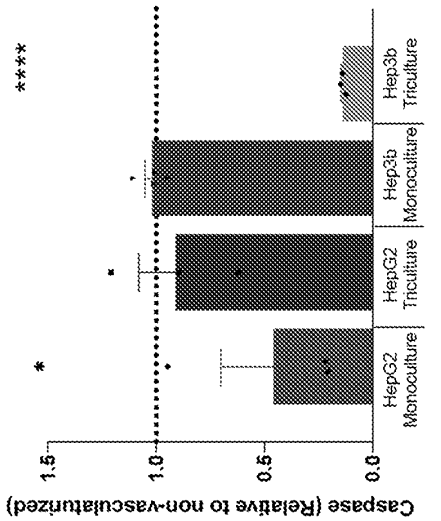


FIG. 7I

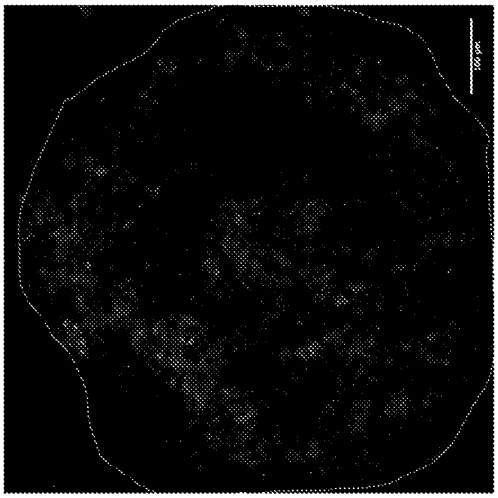

FIG. 7M

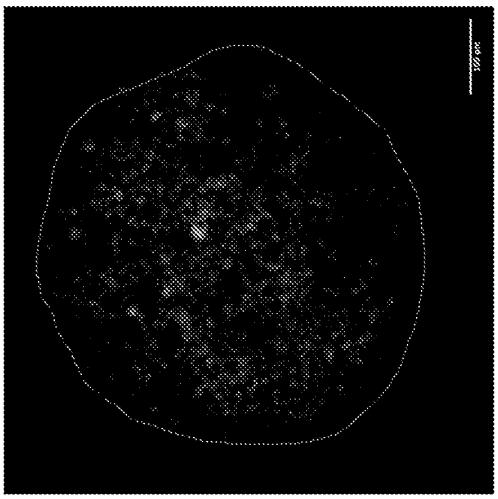

FIG. 7L

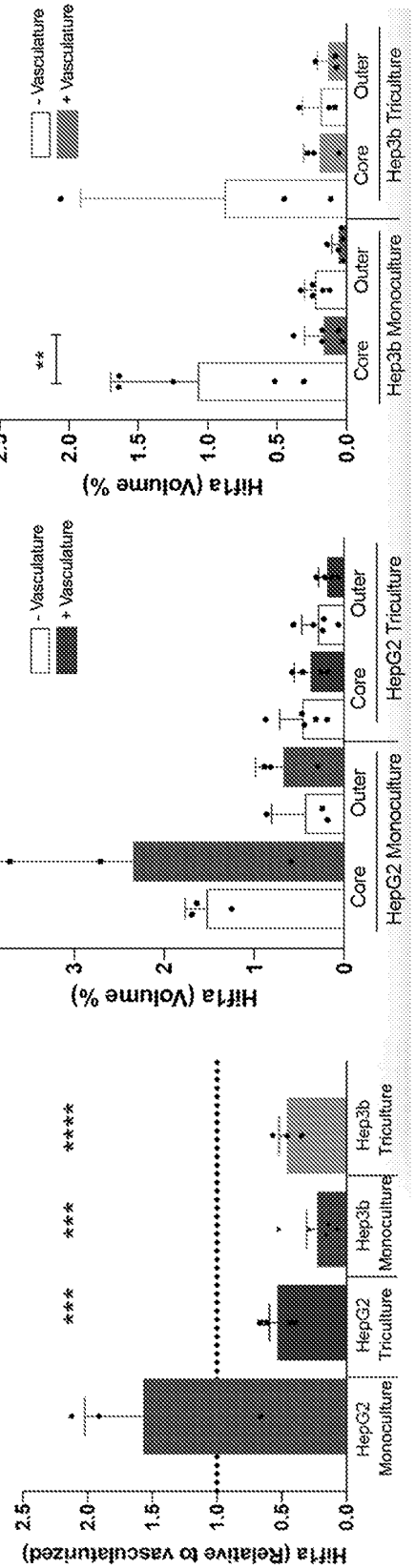


FIG. 7N




FIG. 7P




FIG. 7Q

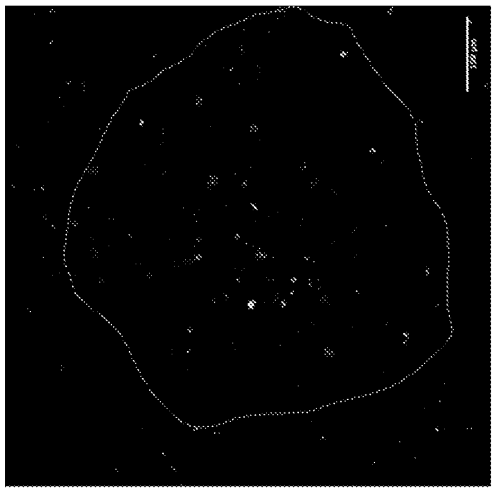

FIG. 7S

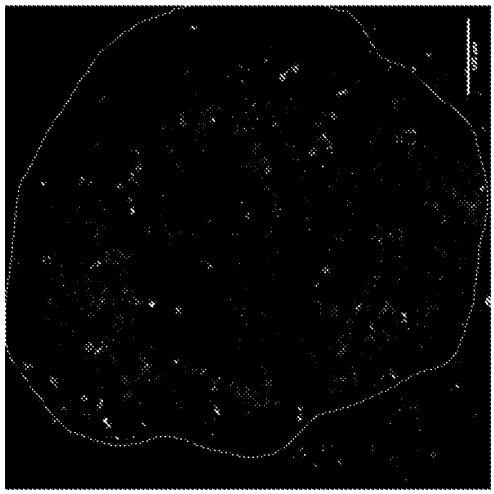

FIG. 7R

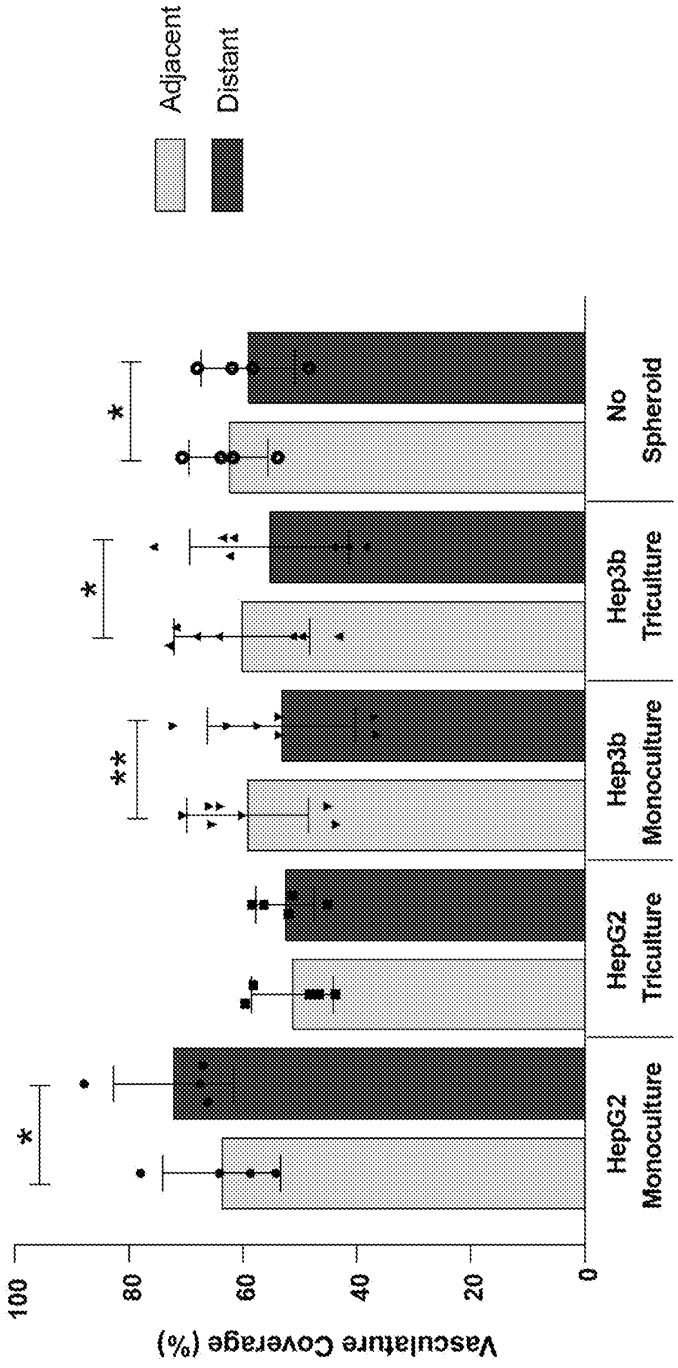
Adjacent
Distant
Vasculature Coverage (%)
0
20
40
60
80
100
HepG2 Monoculture
HepG2 Triculture
Hep3b Monoculture
Hep3b Triculture
No Spheroid
*
**
*
*

FIG. 8

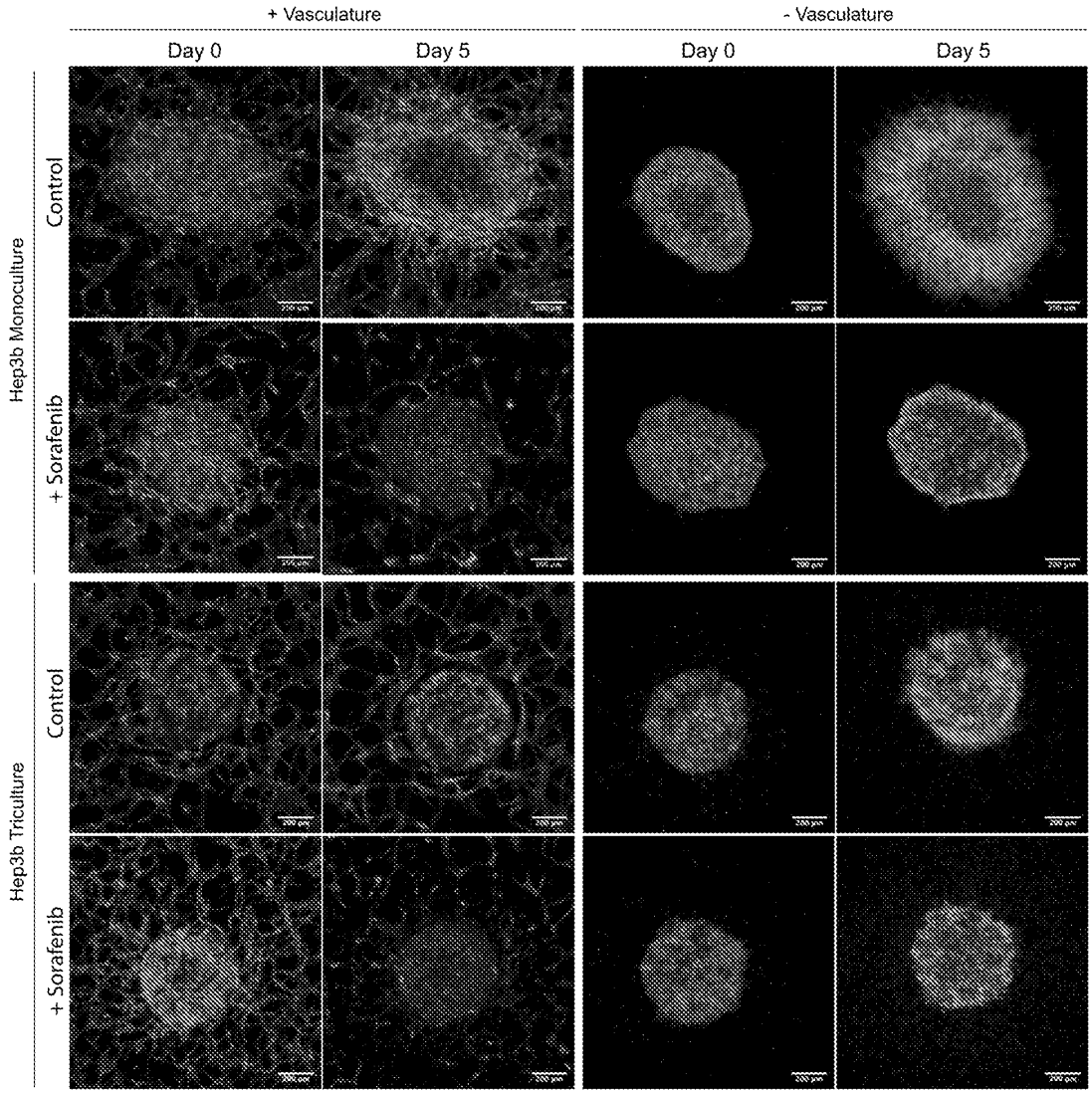
+ Vasculature
- Vasculature
Day 0
Day 5
Day 0
Day 5
Hep3b Monoculture
Control
+ Sorafenib
Hep3b Triculture
Control
+ Sorafenib

FIG. 9A

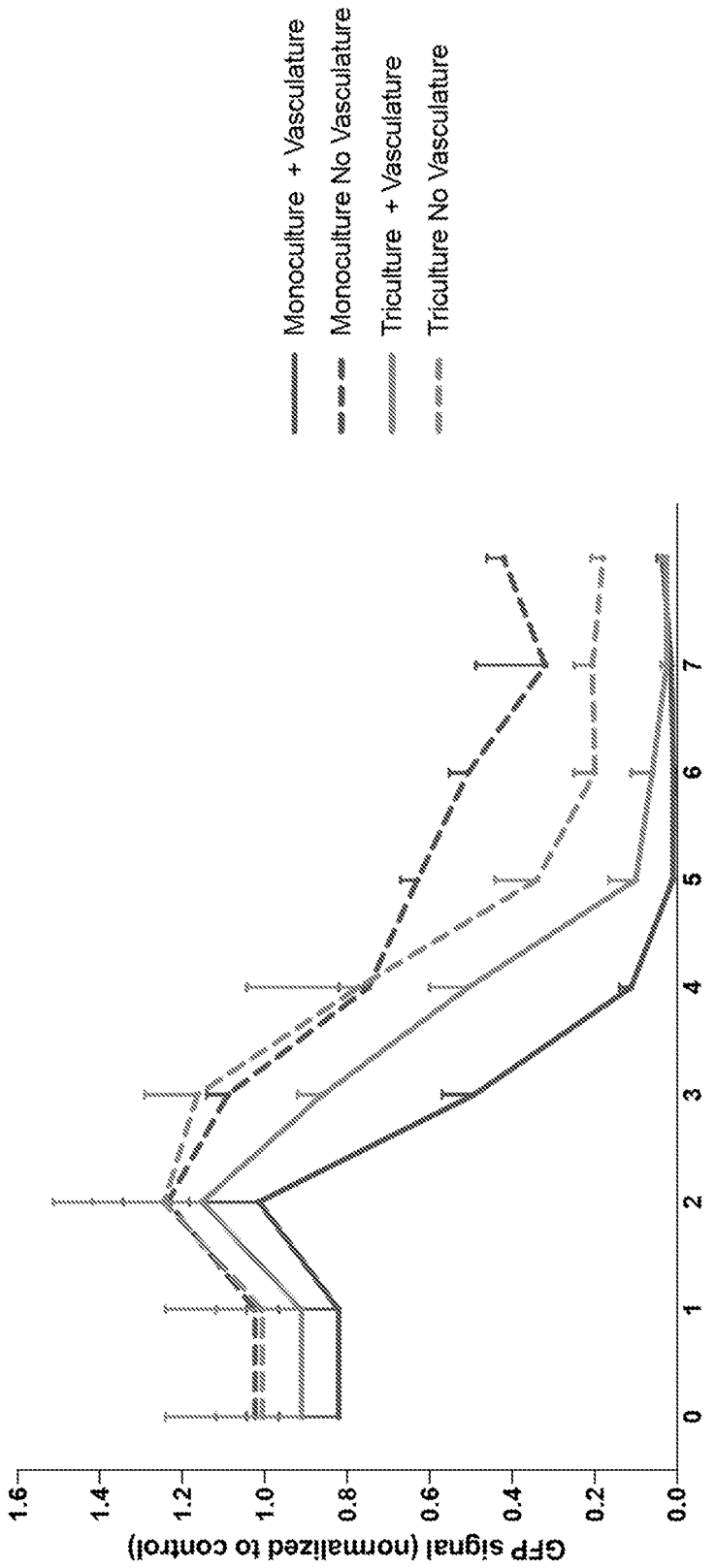
Monoculture + Vasculature
Monoculture No Vasculature
Triculture + Vasculature
Triculture No Vasculature
GFP signal (normalized to control)
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
0
1
2
3
4
5
6
7

FIG. 9B

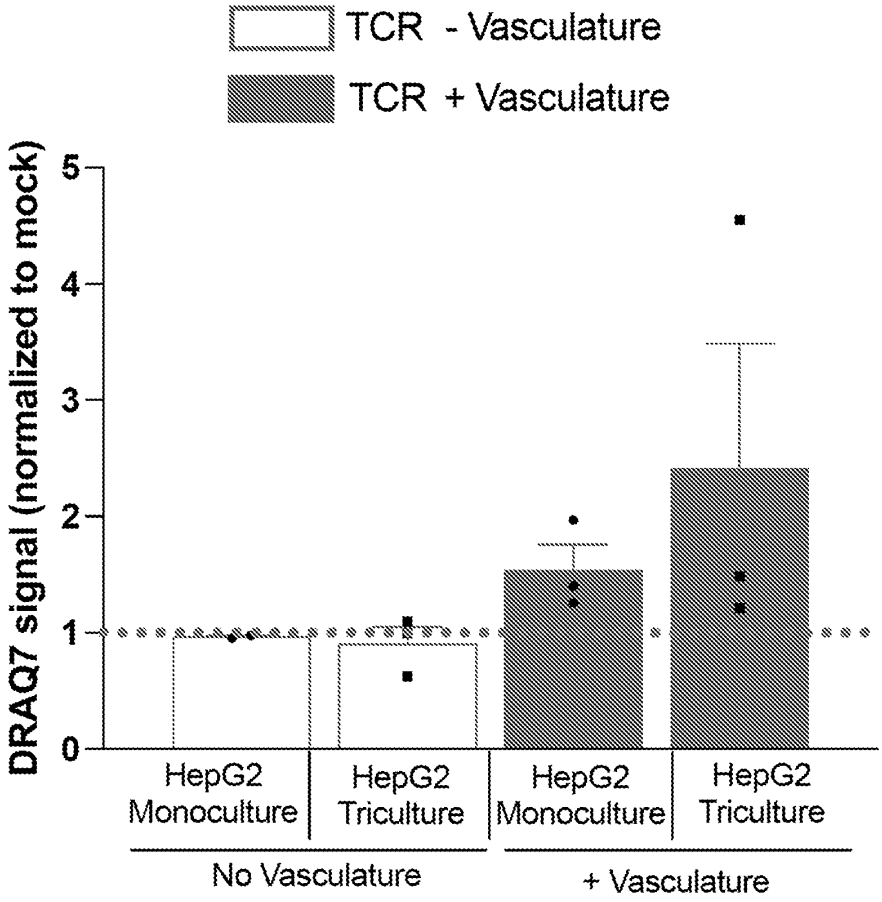
TCR - Vasculature
TCR + Vasculature
DRAQ7 signal (normalized to mock)
0
1
2
3
4
5
HepG2 Monoculture
HepG2 Triculture
HepG2 Monoculture
HepG2 Triculture
No Vasculature
+ Vasculature

FIG. 10A

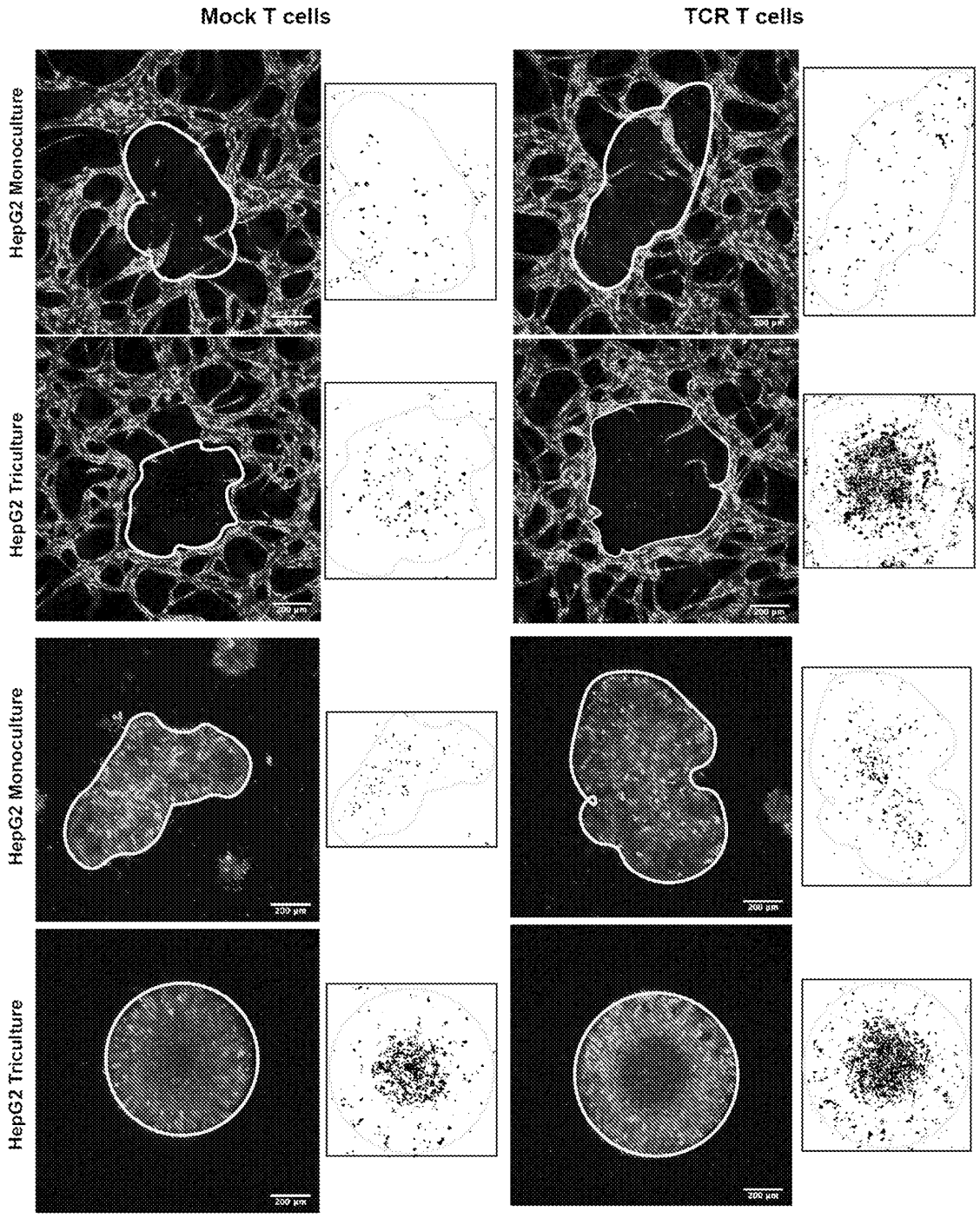
Mock T cells
TCR T cells
HepG2 Monoculture
HepG2 Triculture
HepG2 Monoculture
HepG2 Triculture
200 µm

FIG. 10B

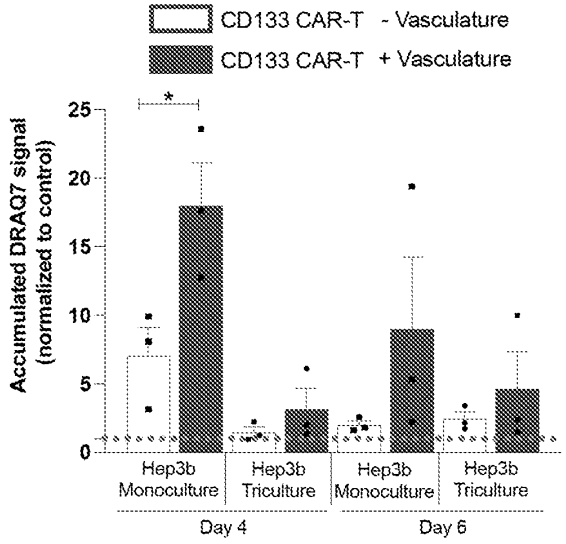


FIG. 10C

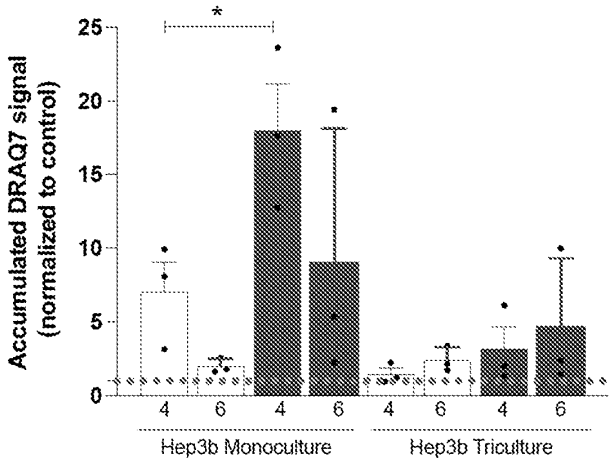


FIG. 10D

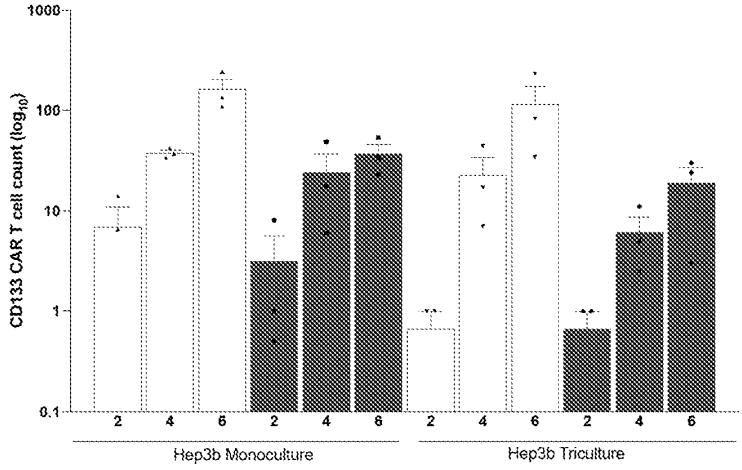


FIG. 10E

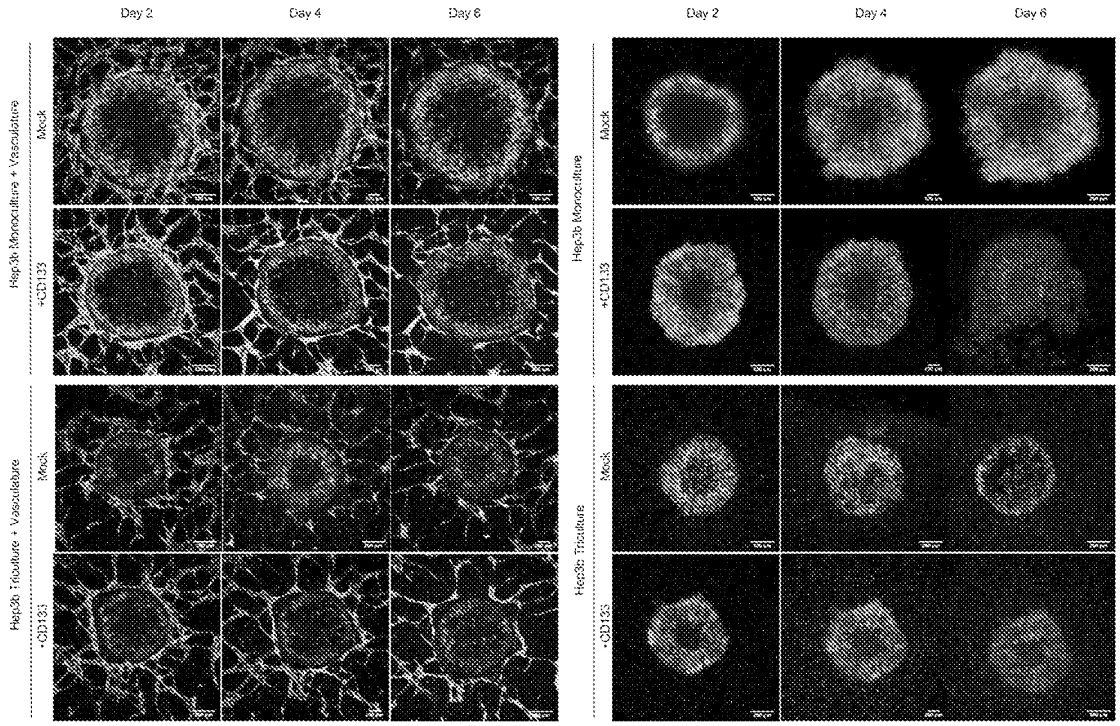


FIG. 10F

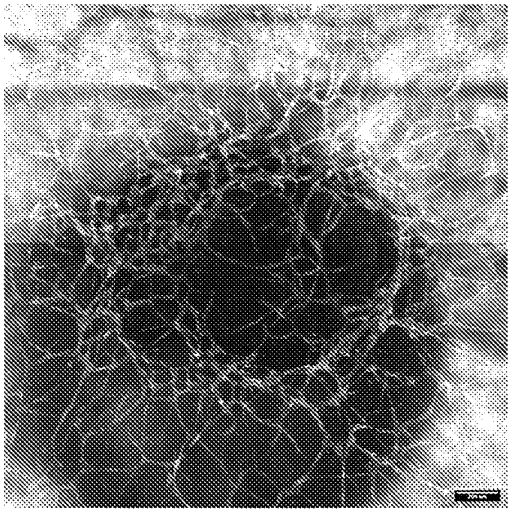

FIG. 11A

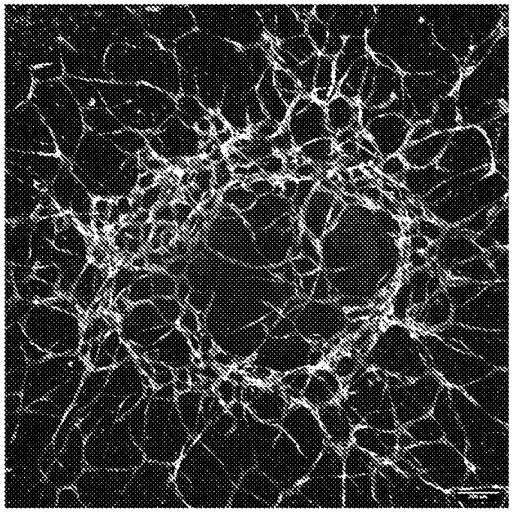

FIG. 11B