FIG. 1

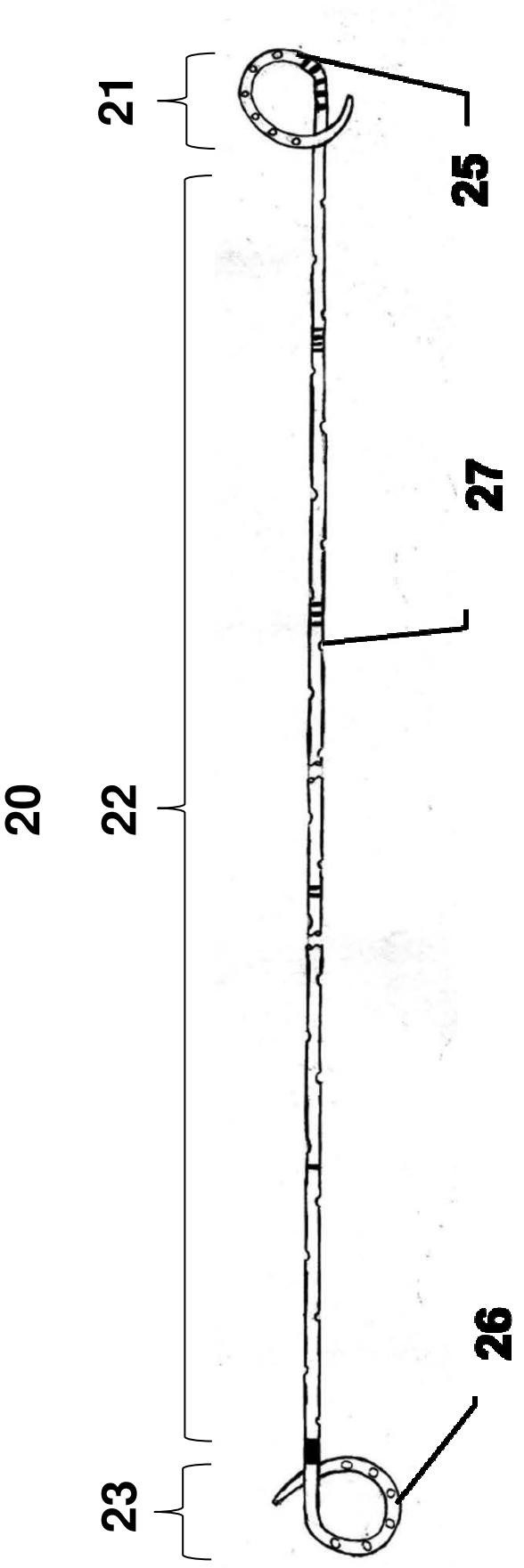


FIG. 2

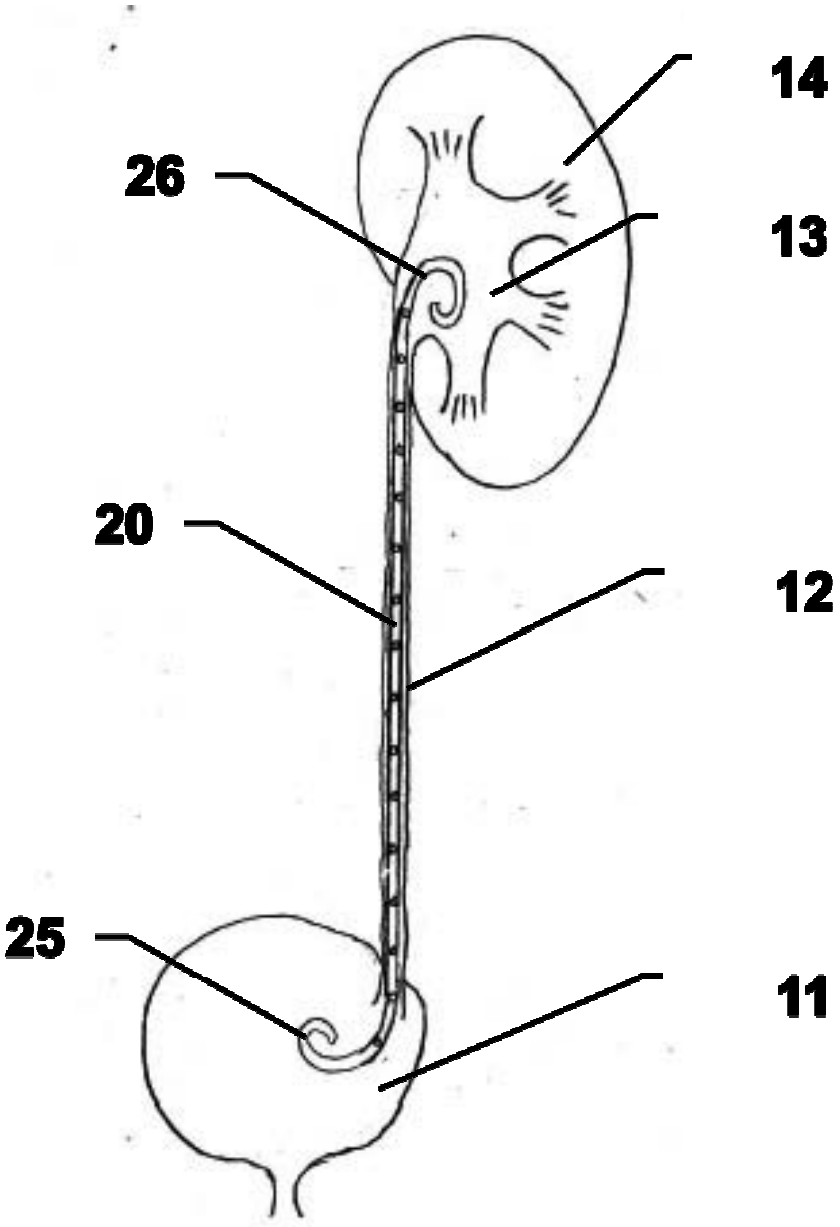


FIG. 3

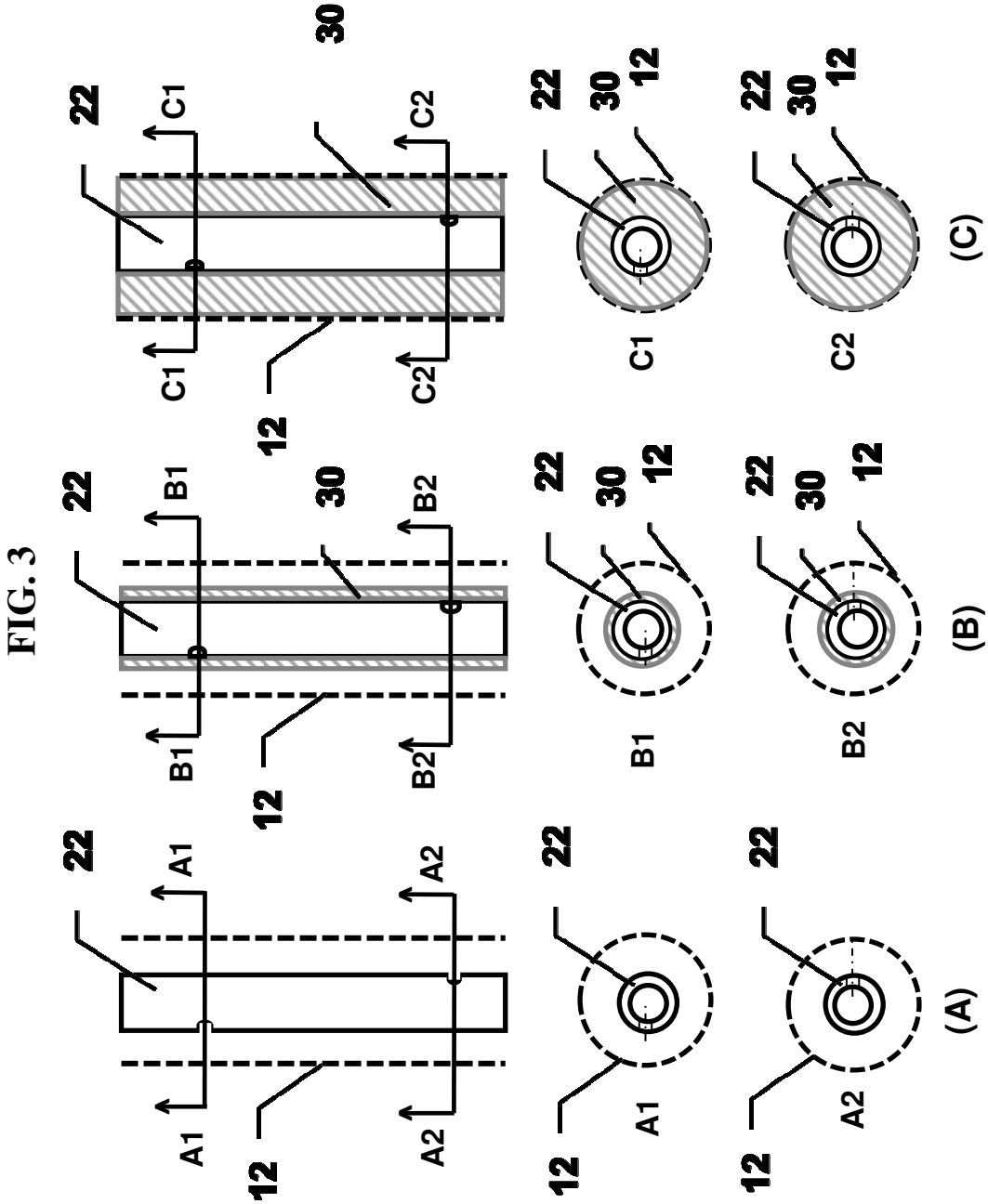

22
A1
A2
12
A1
A2
22
B1
B2
30
12
B1
B2
22
C1
C2
30
12
C1
C2
22
12
A1
22
12
A2
22
30
12
B1
22
30
12
B2
22
30
12
C1
22
30
12
C2
(A)
(B)
(C)

FIG. 4

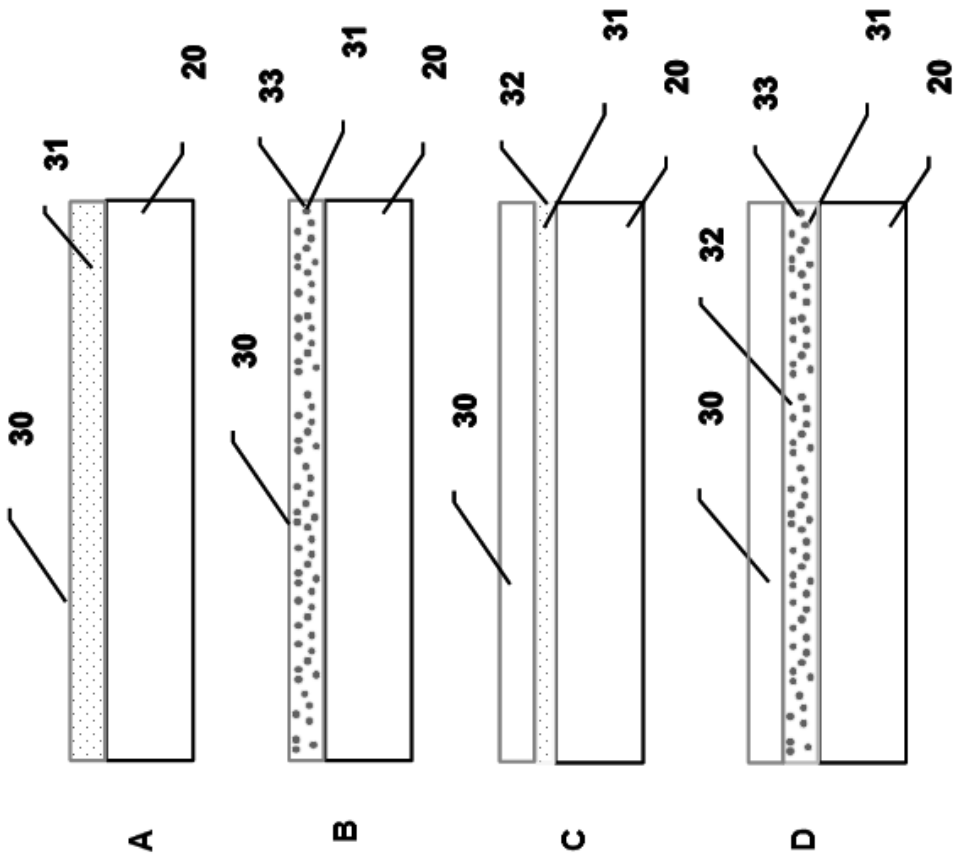


FIG. 5

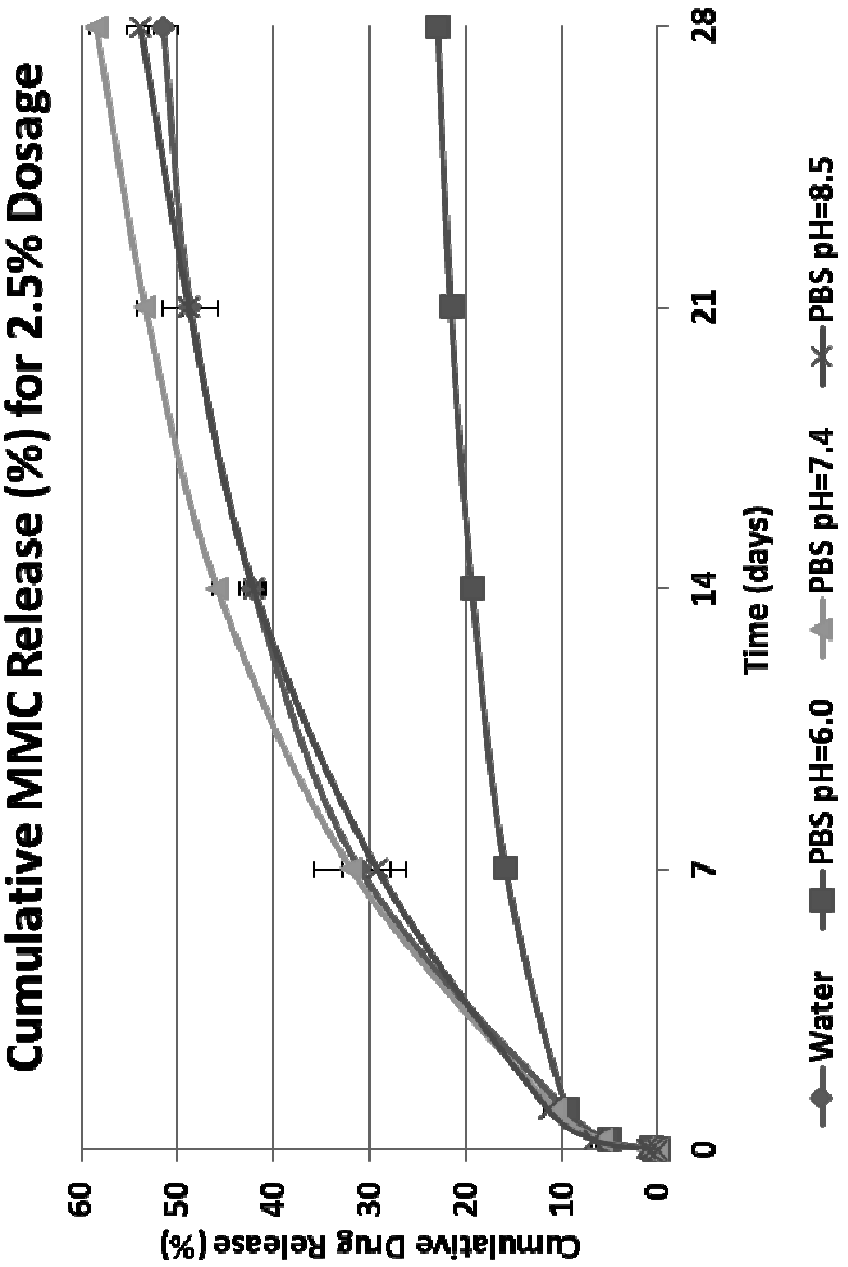

Cumulative MMC Release (%) for 2.5% Dosage
Cumulative Drug Release (%)
0
10
20
30
40
50
60
0
7
14
21
28
Time (days)
Water
PBS pH=6.0
PBS pH=7.4
PBS pH=8.5

FIG. 6

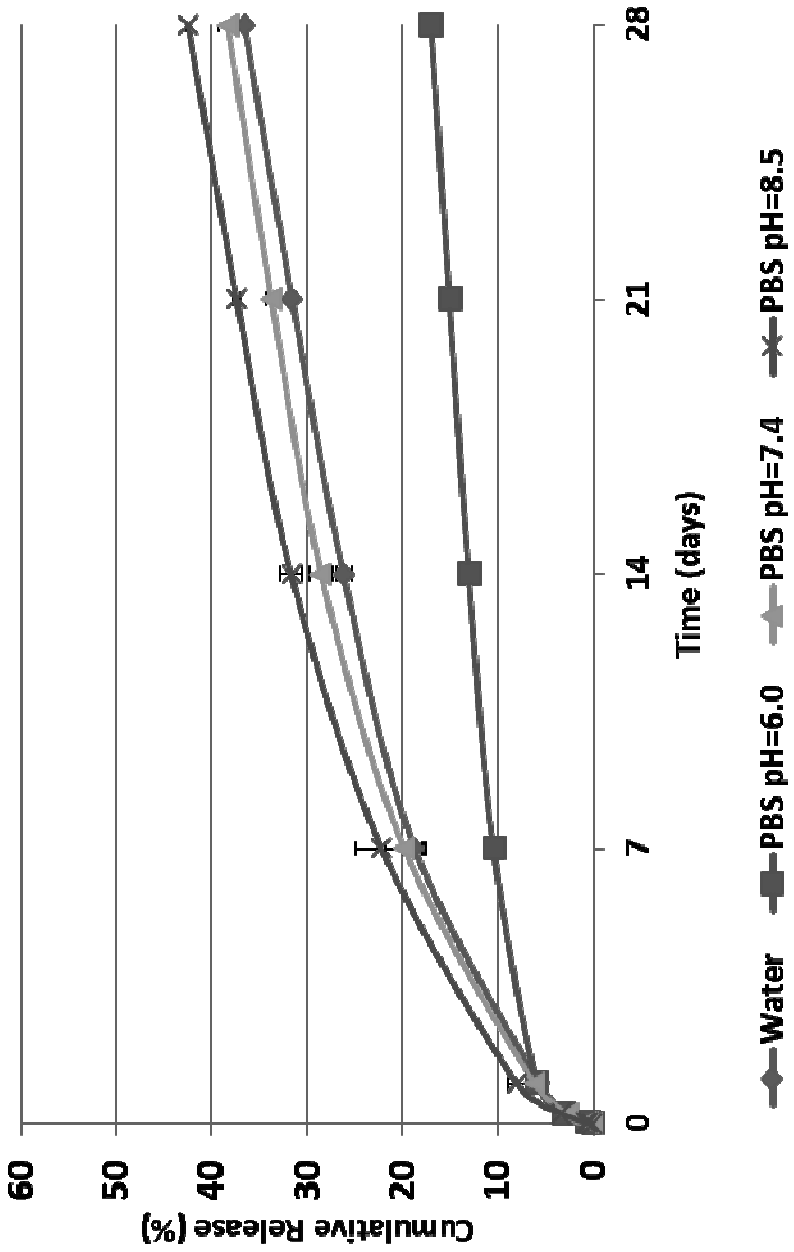

Cumulative MMC Release (%) for 5% Dosage
Cumulative Release (%)
0
10
20
30
40
50
60
0
7
14
21
28
Time (days)
Water
PBS pH=6.0
PBS pH=7.4
PBS pH=8.5

FIG. 7

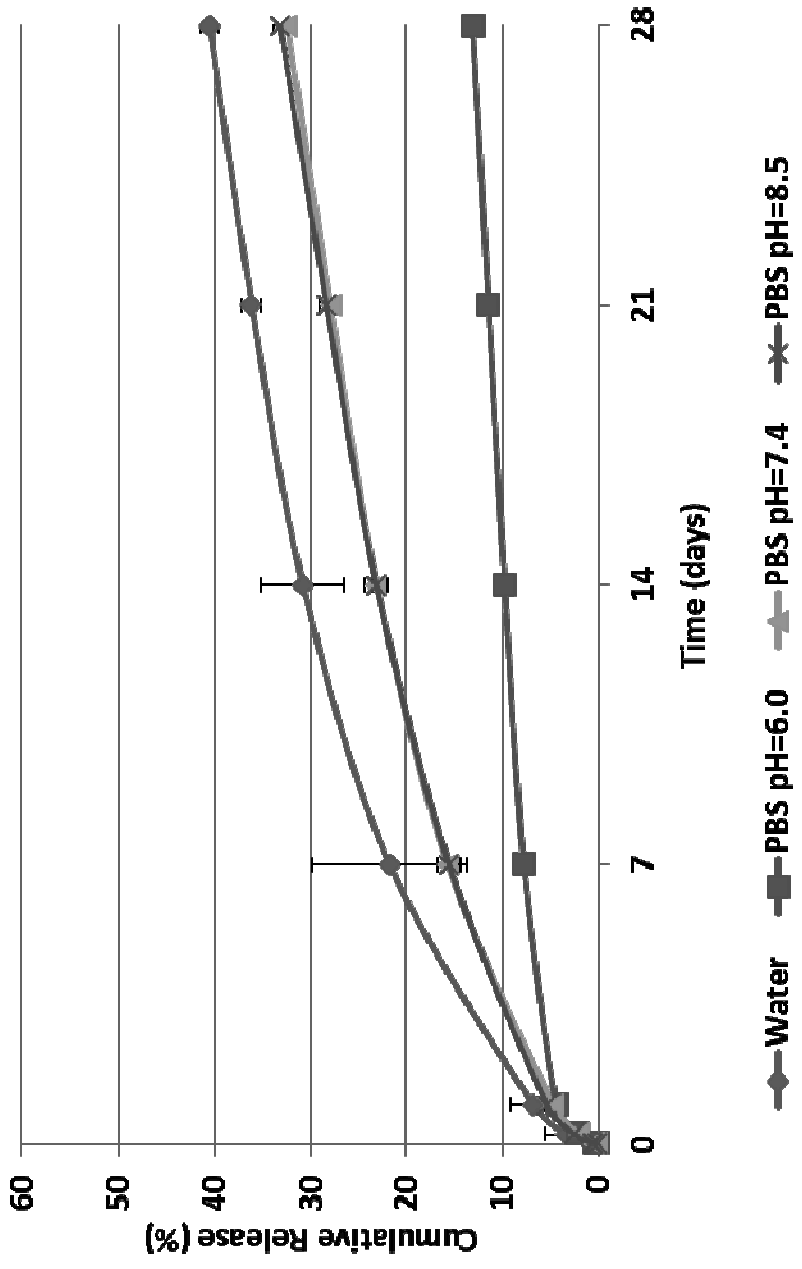

Cumulative MMC Release (%) for 7.5% Dosage
Cumulative Release (%)
0
10
20
30
40
50
60
0
7
14
21
28
Time (days)
Water
PBS pH=6.0
PBS pH=7.4
PBS pH=8.5

FIG. 8

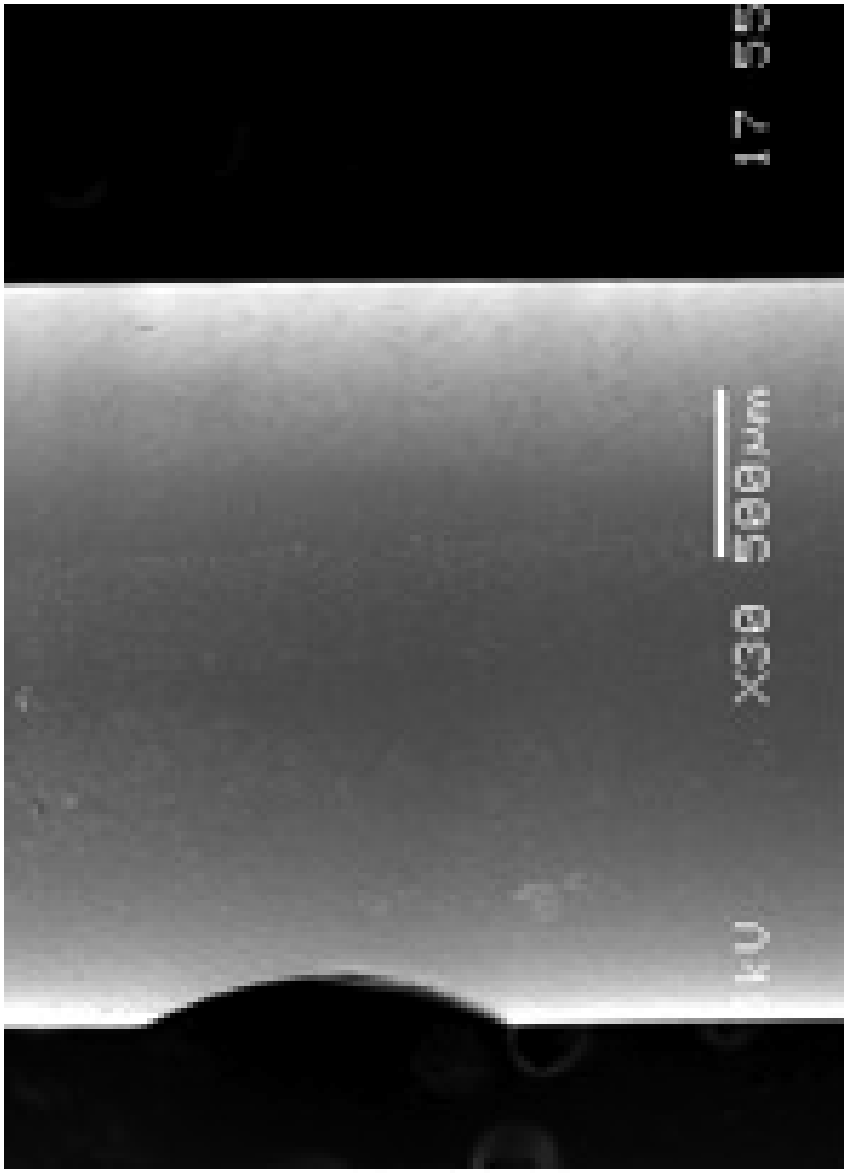


FIG. 9

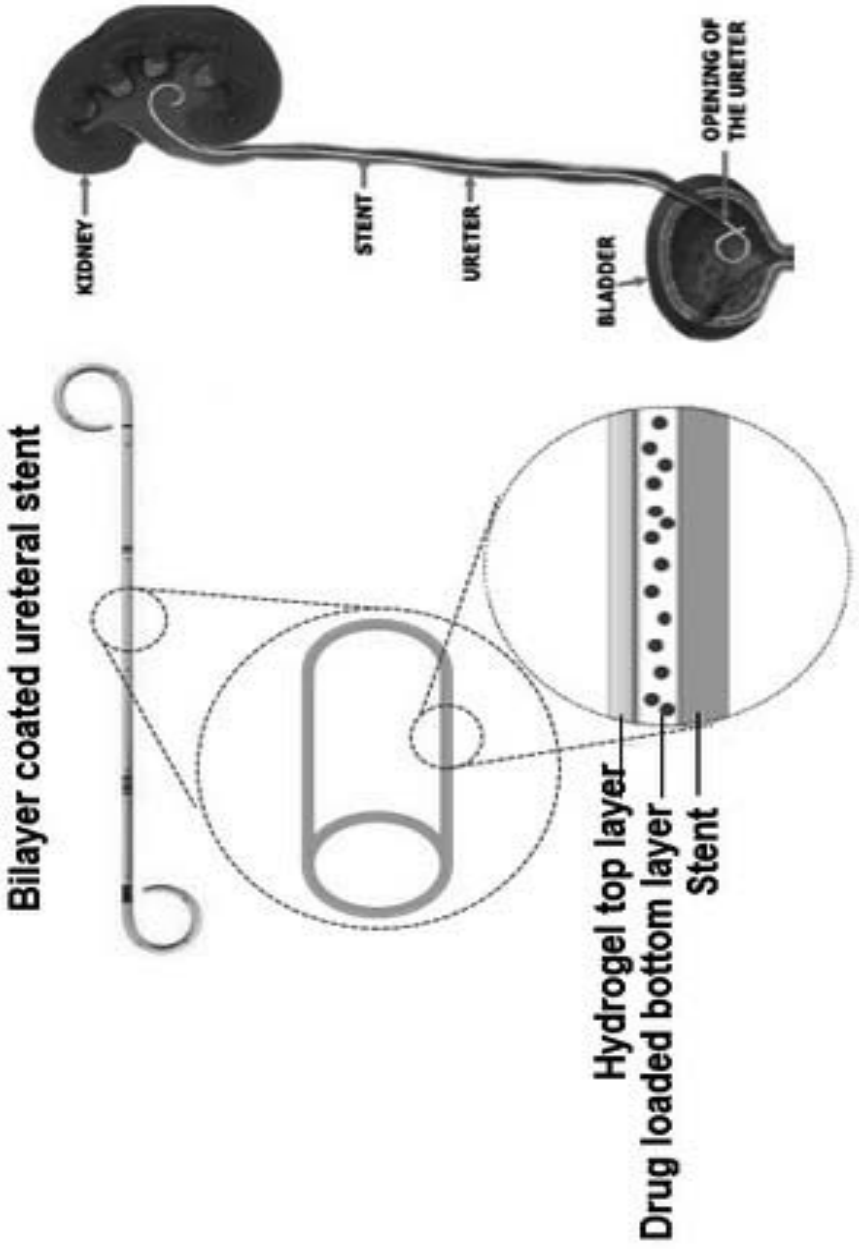

KIDNEY
STENT
URETER
BLADDER
OPENING OF THE URETER
Bilayer coated ureteral stent
Hydrogel top layer
Drug loaded bottom layer
Stent

FIG. 10

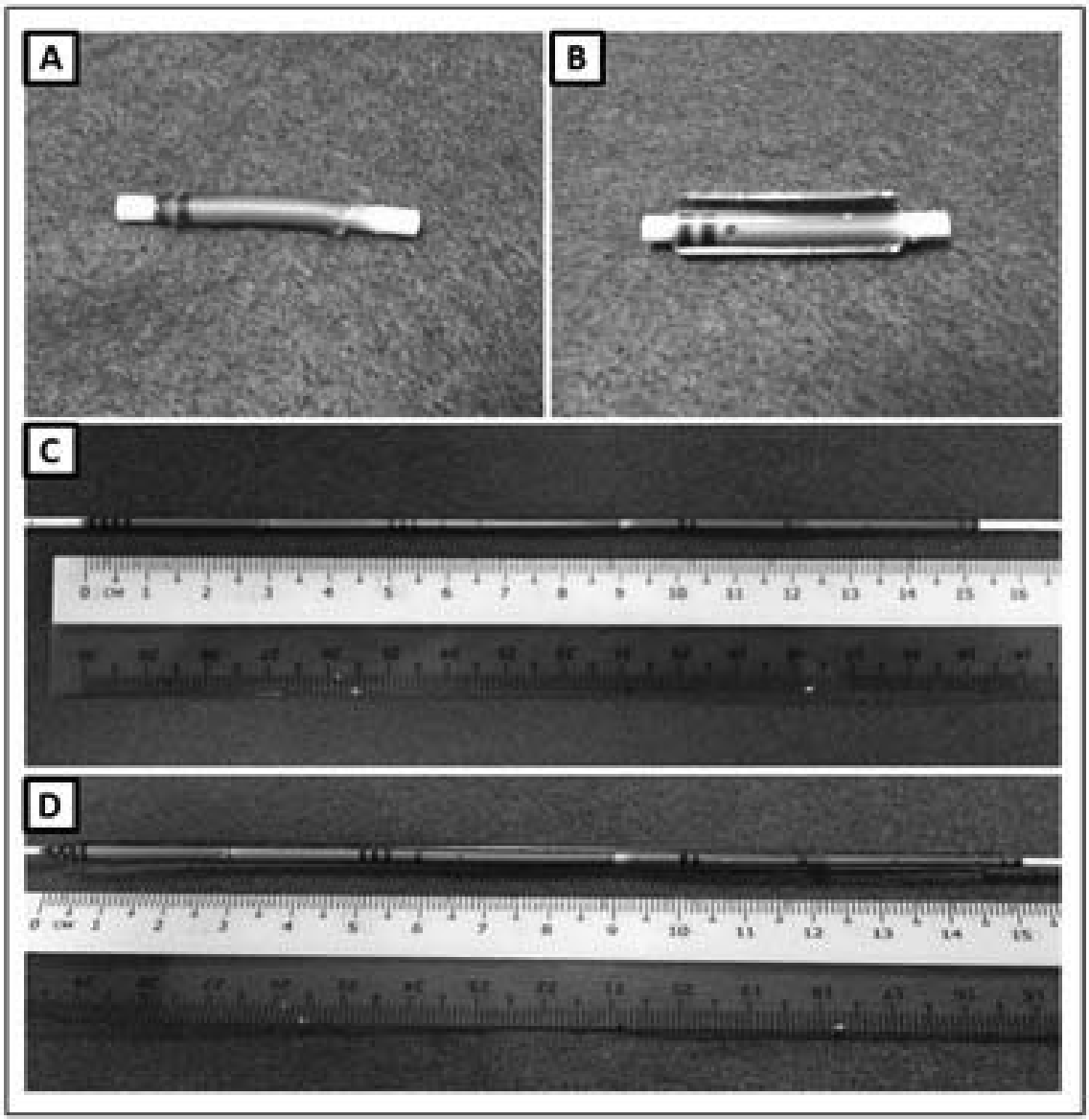
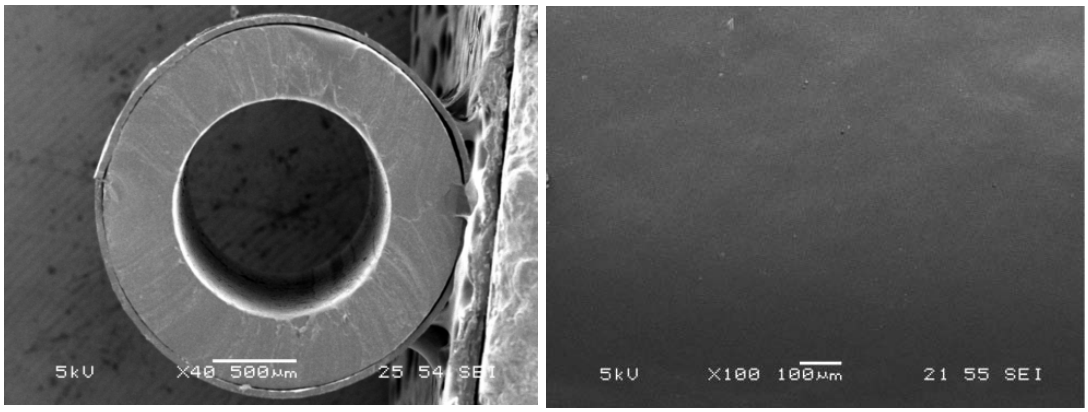


FIG. 11

(A) 2.5% MMC, no PEGDA



(B) 5% MMC, no PEGDA

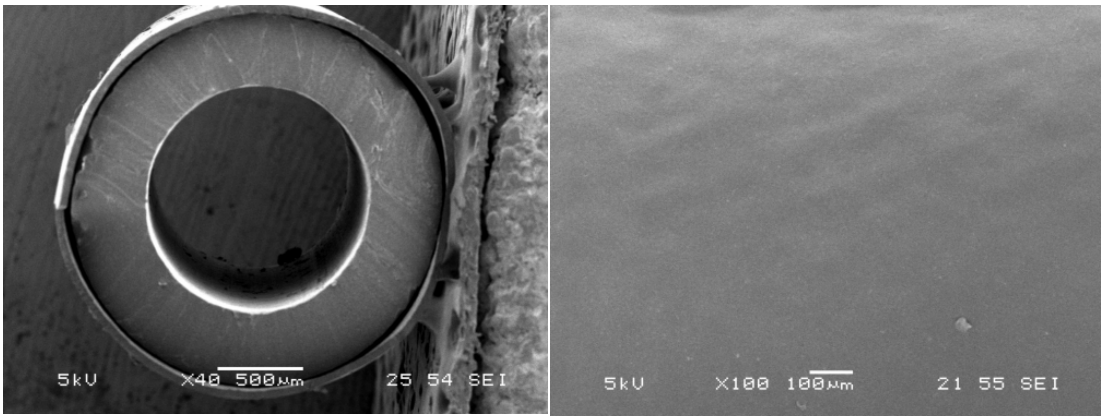
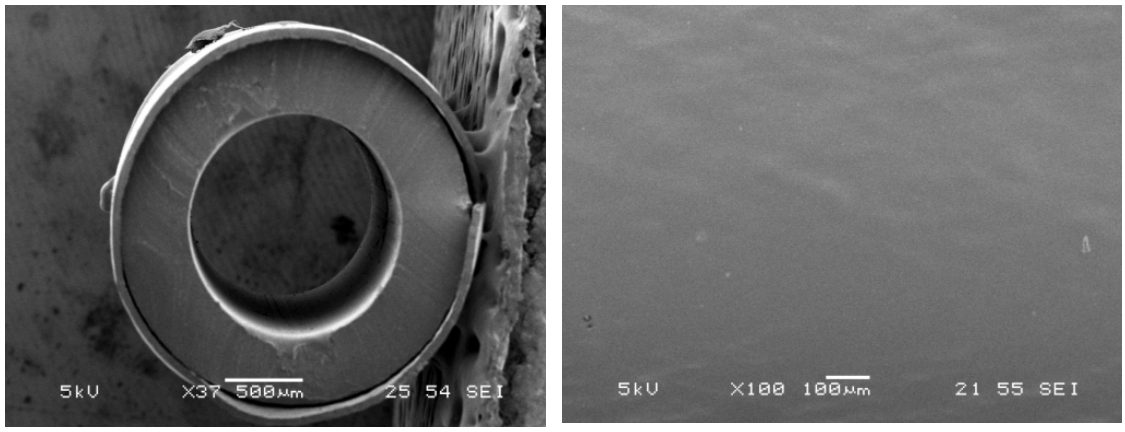


FIG. 11 (Cont.)

(C) 7.5% MMC, no PEGDA



(D) 5% MMC, with PEGDA

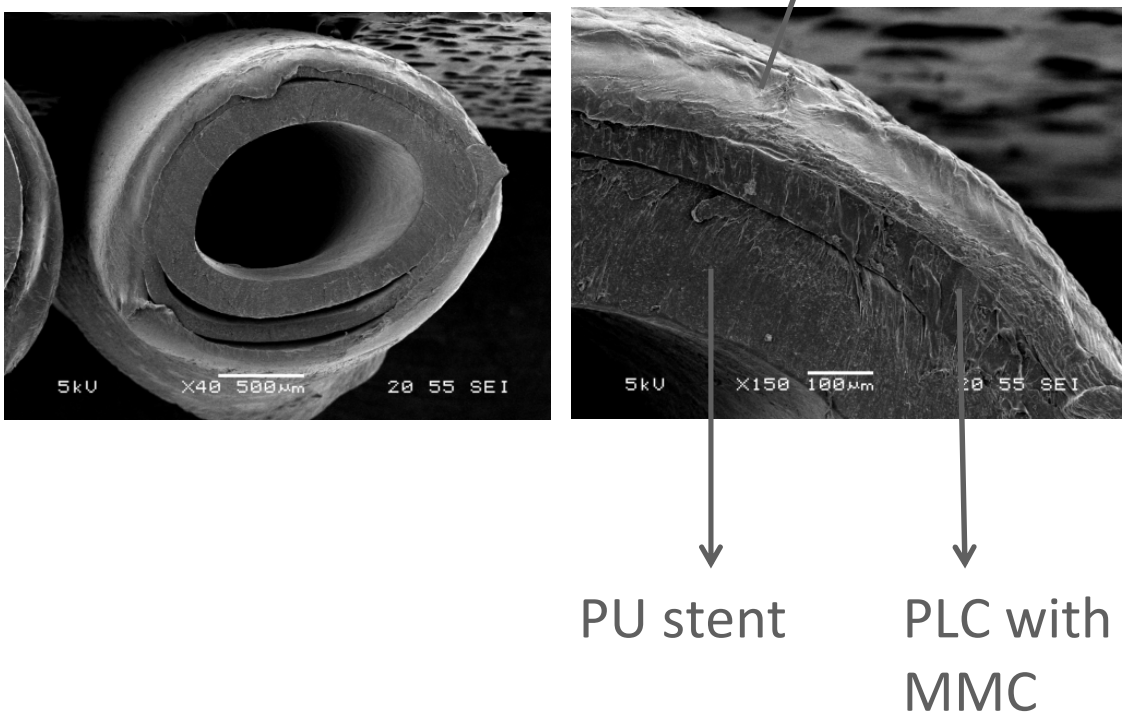


FIG. 12

(A)

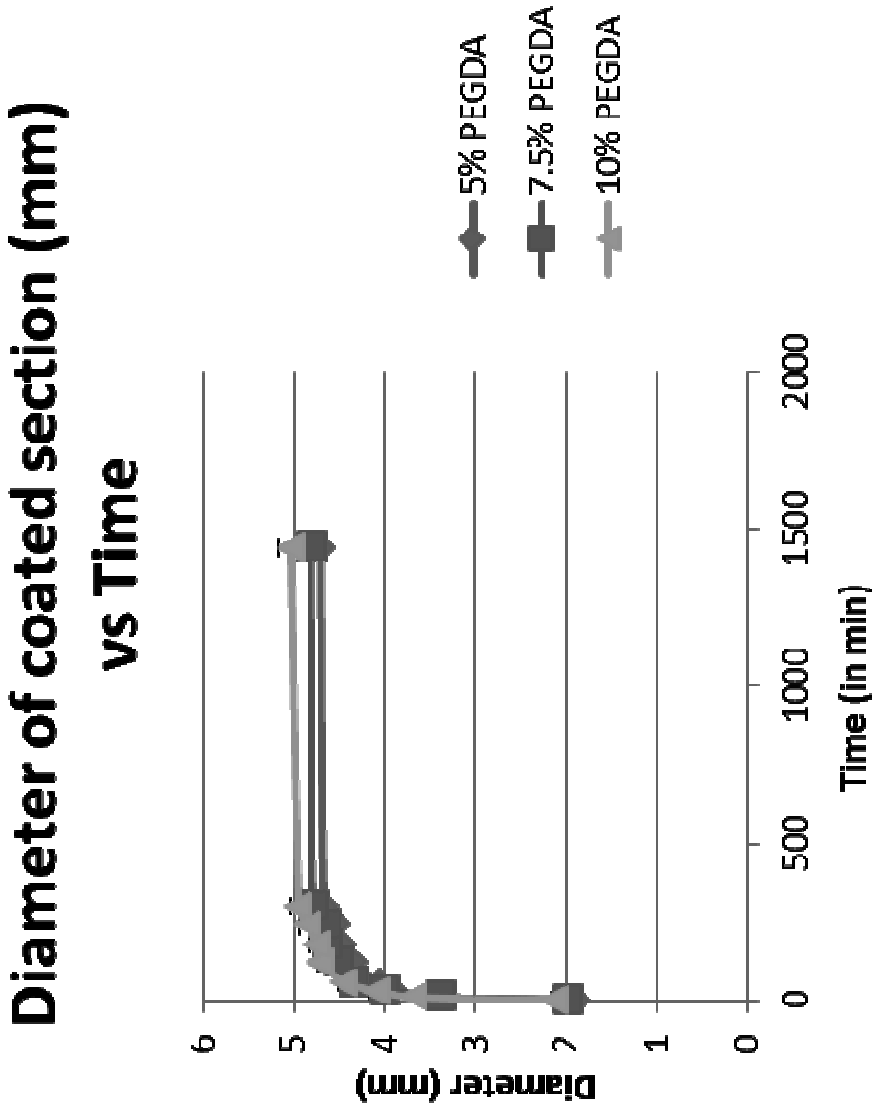

Diameter of coated section (mm) vs Time
5% PEGDA
7.5% PEGDA
10% PEGDA
Diameter (mm)
0
1
2
3
4
5
6
0
500
1000
1500
2000
Time (in min)

FIG. 12 (Cont.)

(B)

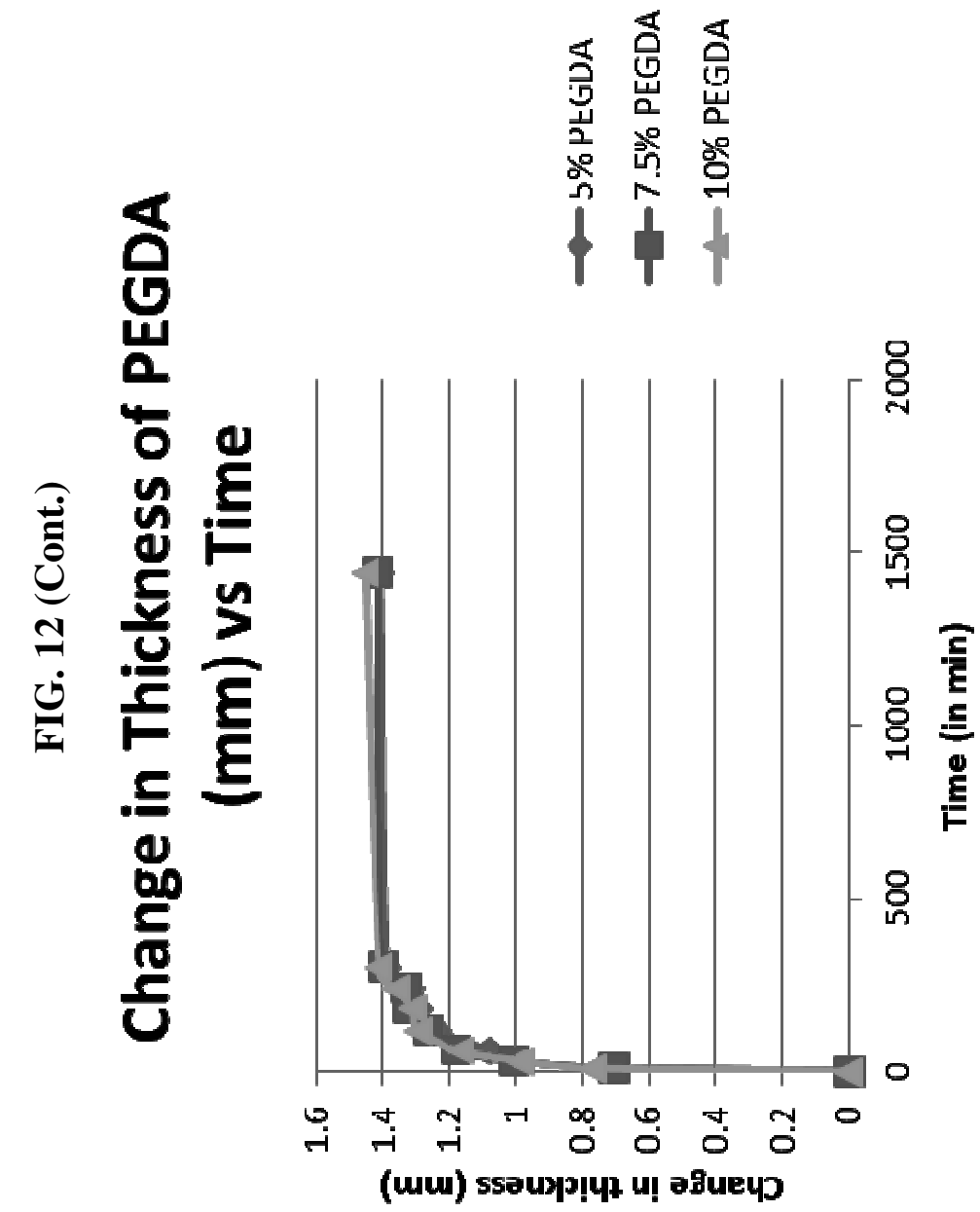
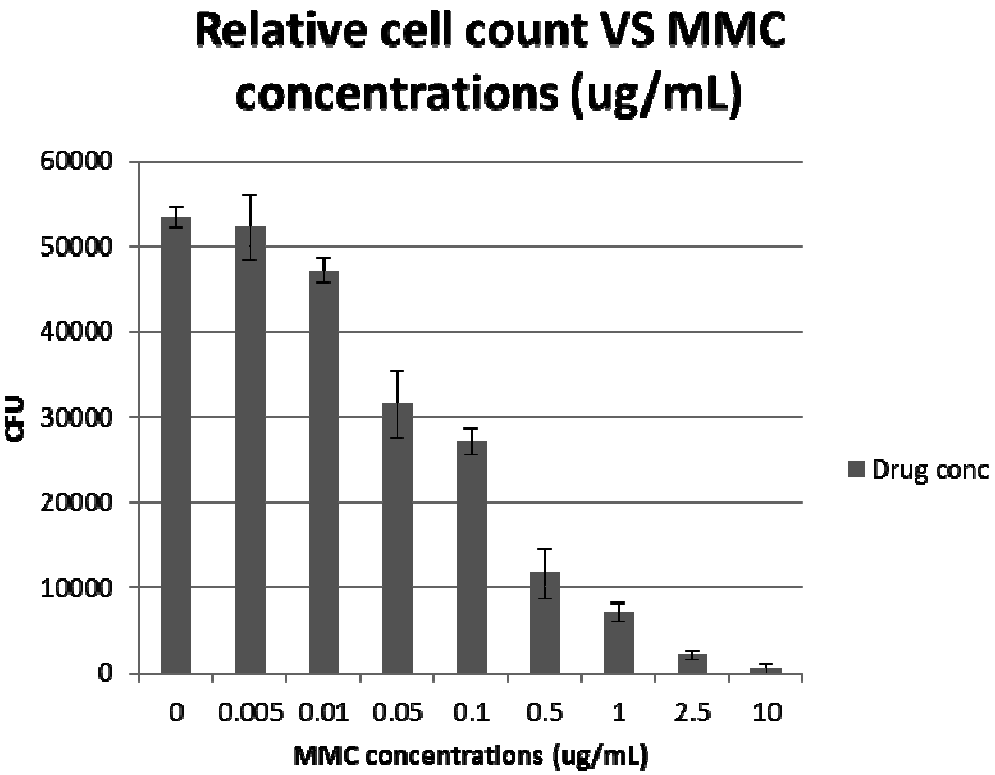

Change in Thickness of PEGDA (mm) vs Time
5% PEGDA
7.5% PEGDA
10% PEGDA
Change in thickness (mm)
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
0
500
1000
1500
2000
Time (in min)

FIG. 13

(A)


Relative cell count VS MMC concentrations (ug/mL)
60000
50000
40000
30000
20000
10000
0
CFU
0
0.005
0.01
0.05
0.1
0.5
1
2.5
10
MMC concentrations (ug/mL)
Drug conc

(B)

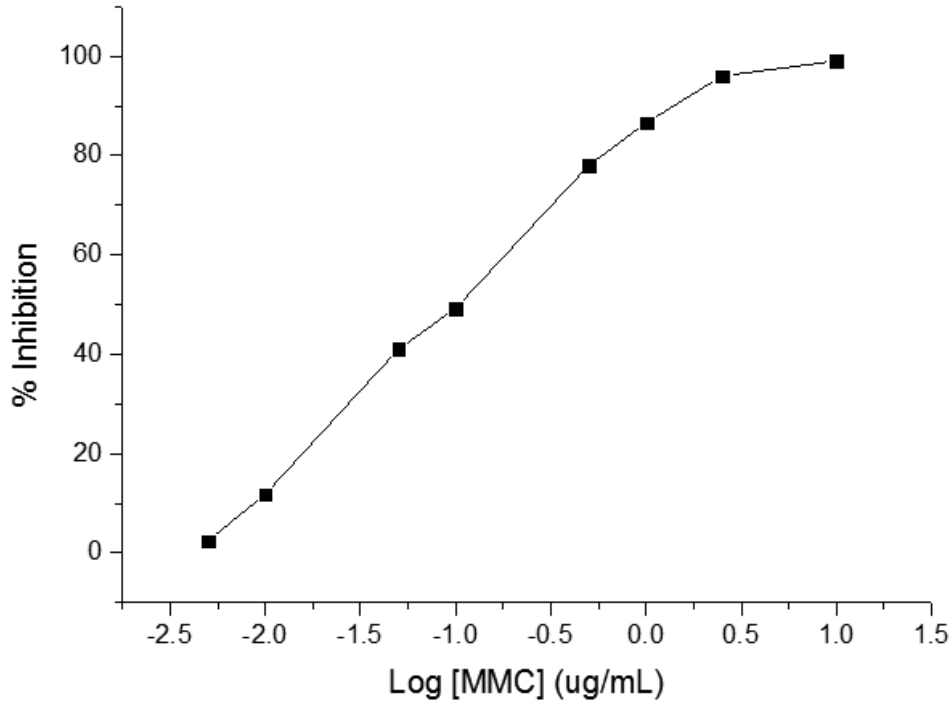
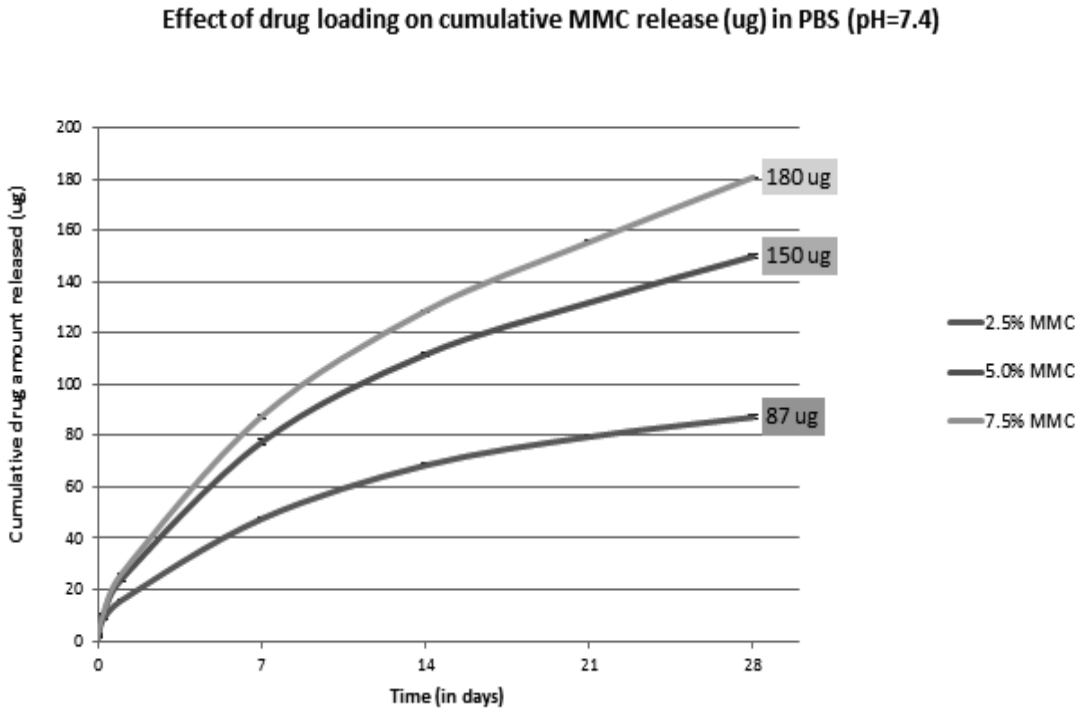

100
80
60
40
20
0
% Inhibition
-2.5
-2.0
-1.5
-1.0
-0.5
0.0
0.5
1.0
1.5
Log [MMC] (ug/mL)

FIG. 14

(A)


Effect of drug loading on cumulative MMC release (ug) in PBS (pH=7.4)
Cumulative drug amount released (ug)
Time (in days)
180 ug
150 ug
87 ug
2.5% MMC
5.0% MMC
7.5% MMC

(B)

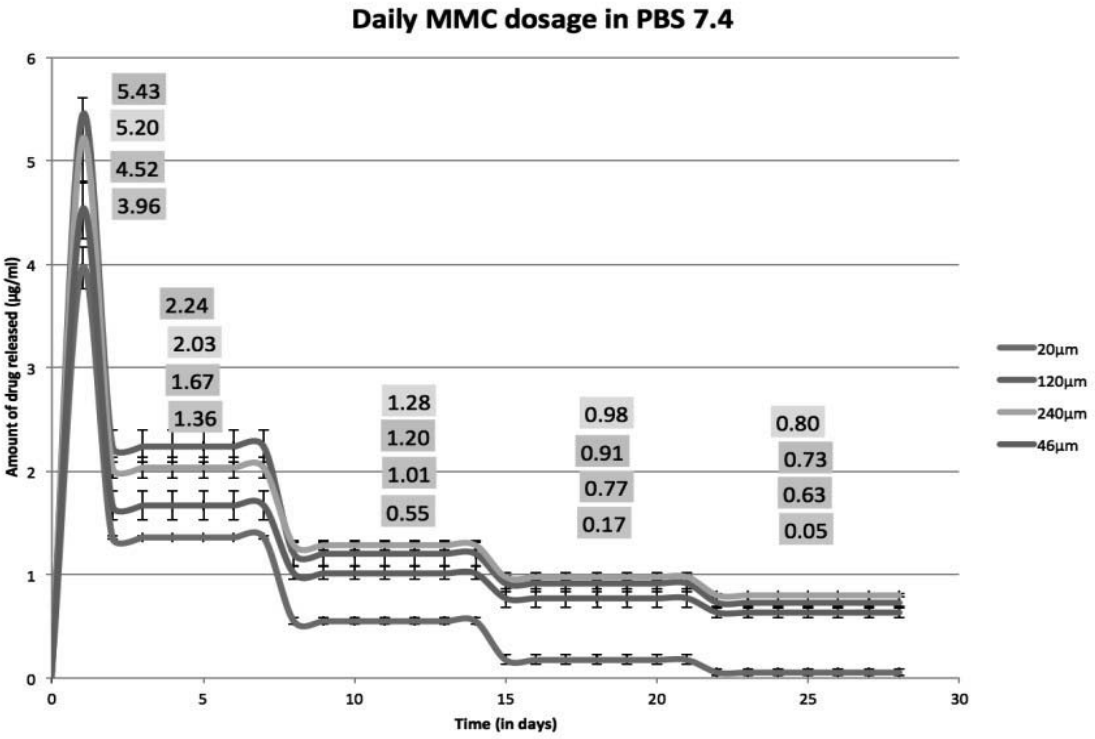
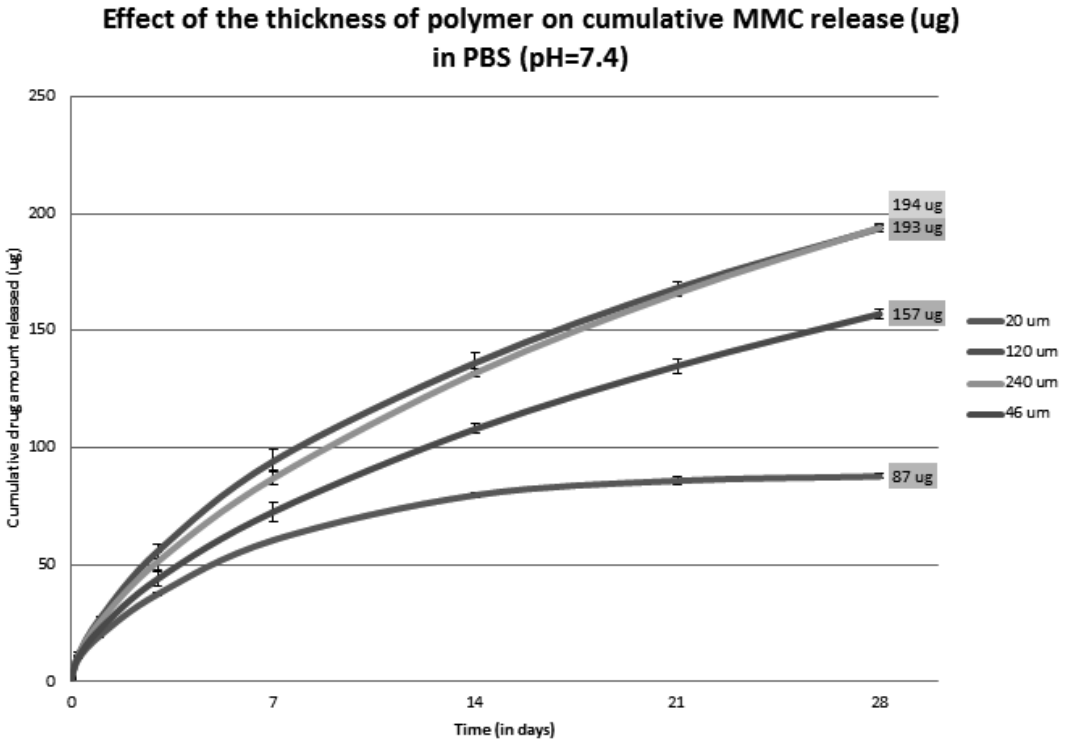

Daily MMC dosage in PBS 7.4
Amount of drug released (µg/ml)
Time (in days)
5.43
5.20
4.52
3.96
2.24
2.03
1.67
1.36
1.28
1.20
1.01
0.55
0.98
0.91
0.77
0.17
0.80
0.73
0.63
0.05
20µm
120µm
240µm
46µm

FIG. 14 (Cont.)

(C)



(D)

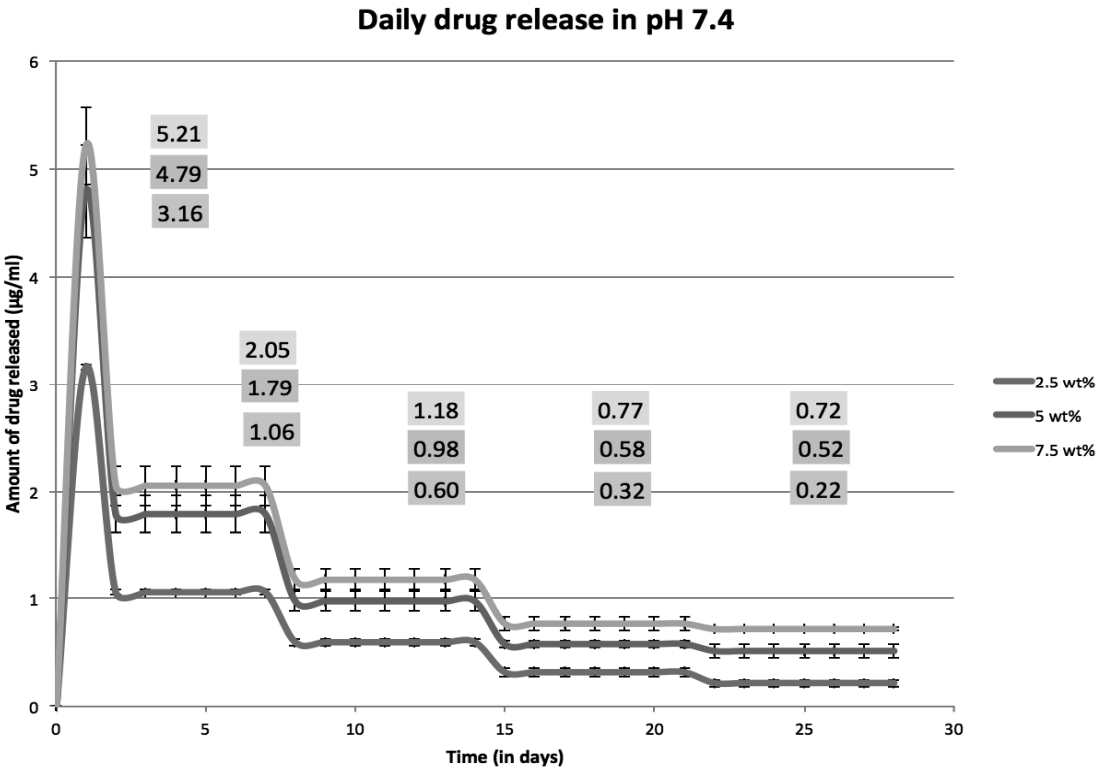
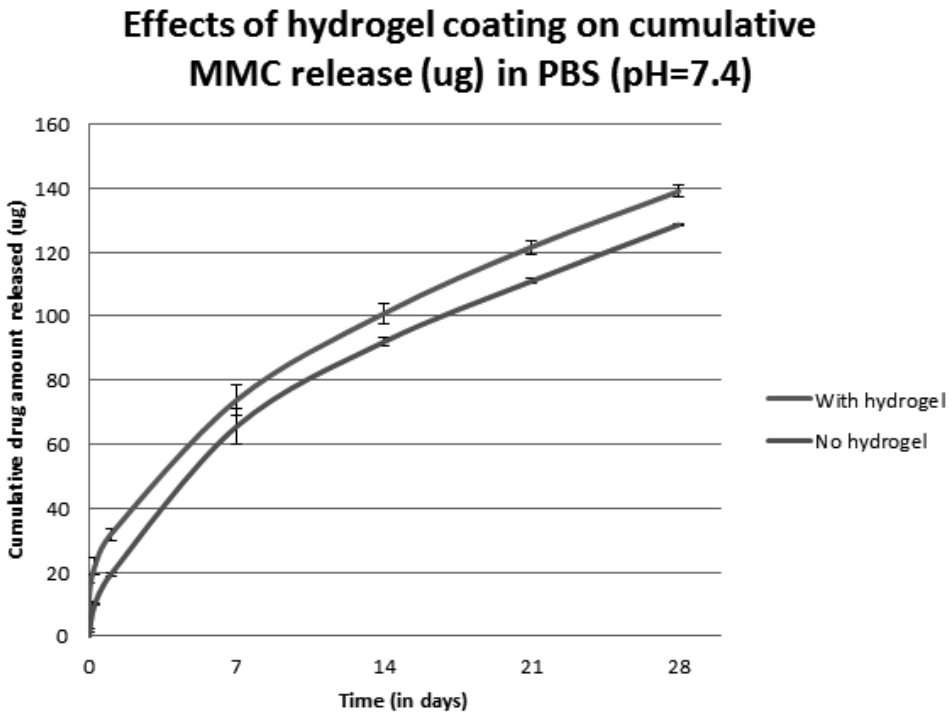


FIG. 15

(A)


Effects of hydrogel coating on cumulative MMC release (ug) in PBS (pH=7.4)
Cumulative drug amount released (ug)
160
140
120
100
80
60
40
20
0
0
7
14
21
28
Time (in days)
With hydrogel
No hydrogel

(B)

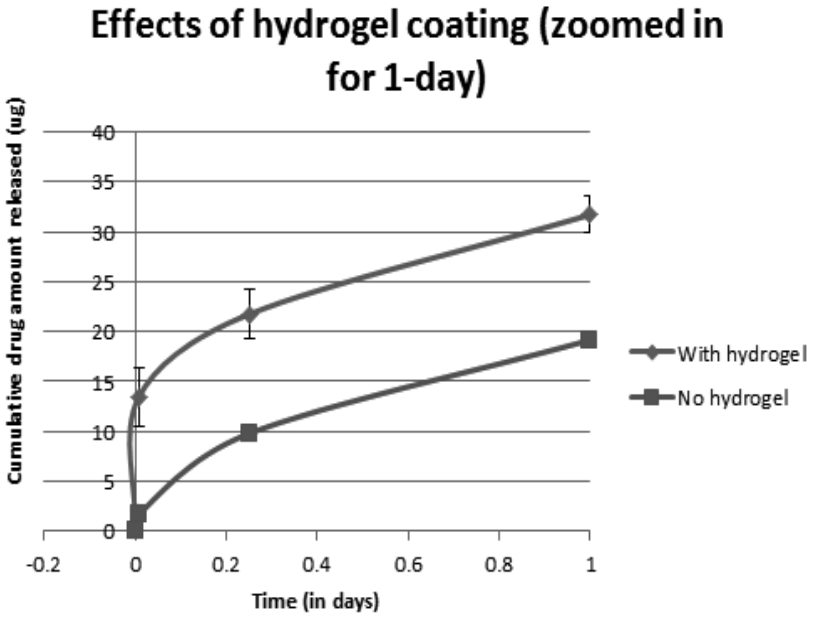

Effects of hydrogel coating (zoomed in for 1-day)
Cumulative drug amount released (ug)
40
35
30
25
20
15
10
5
0
-0.2
0
0.2
0.4
0.6
0.8
1
Time (in days)
With hydrogel
No hydrogel

FIG. 16

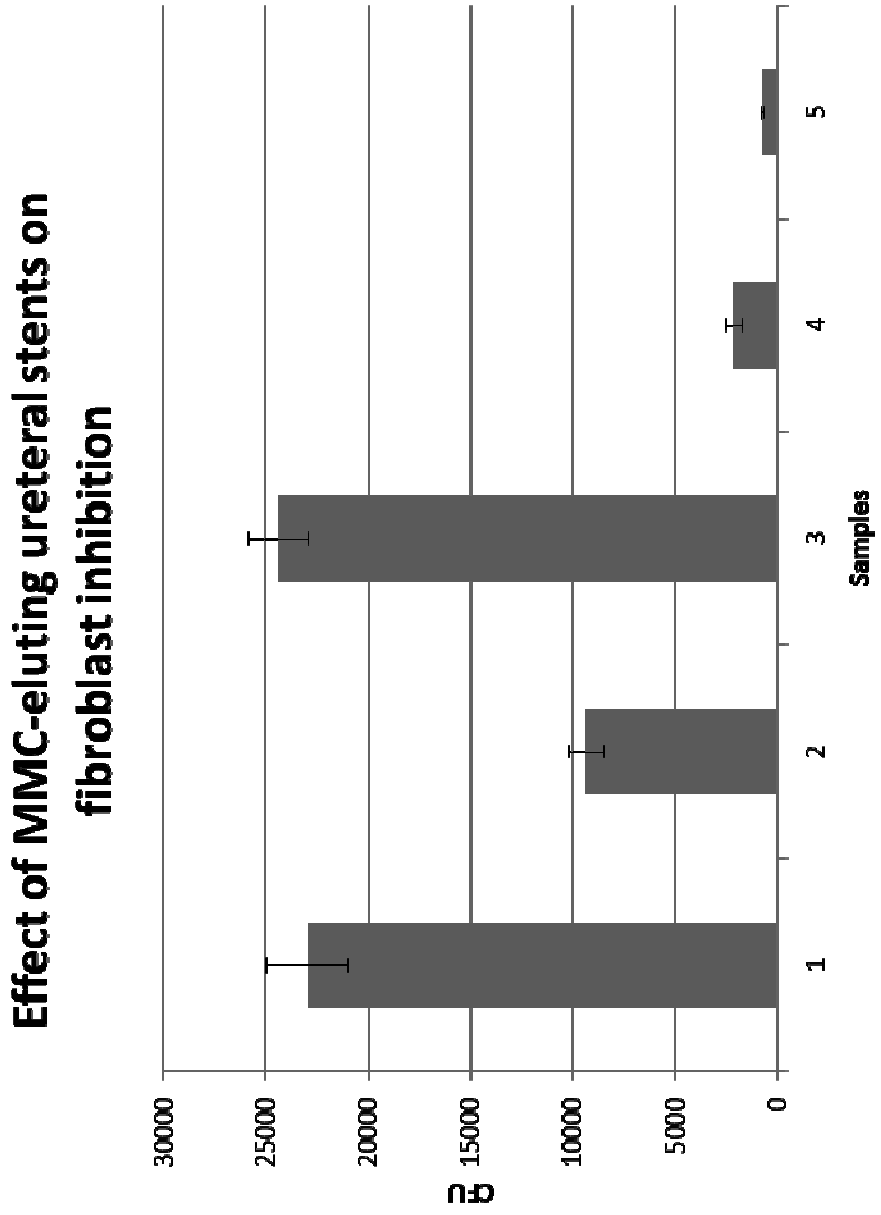
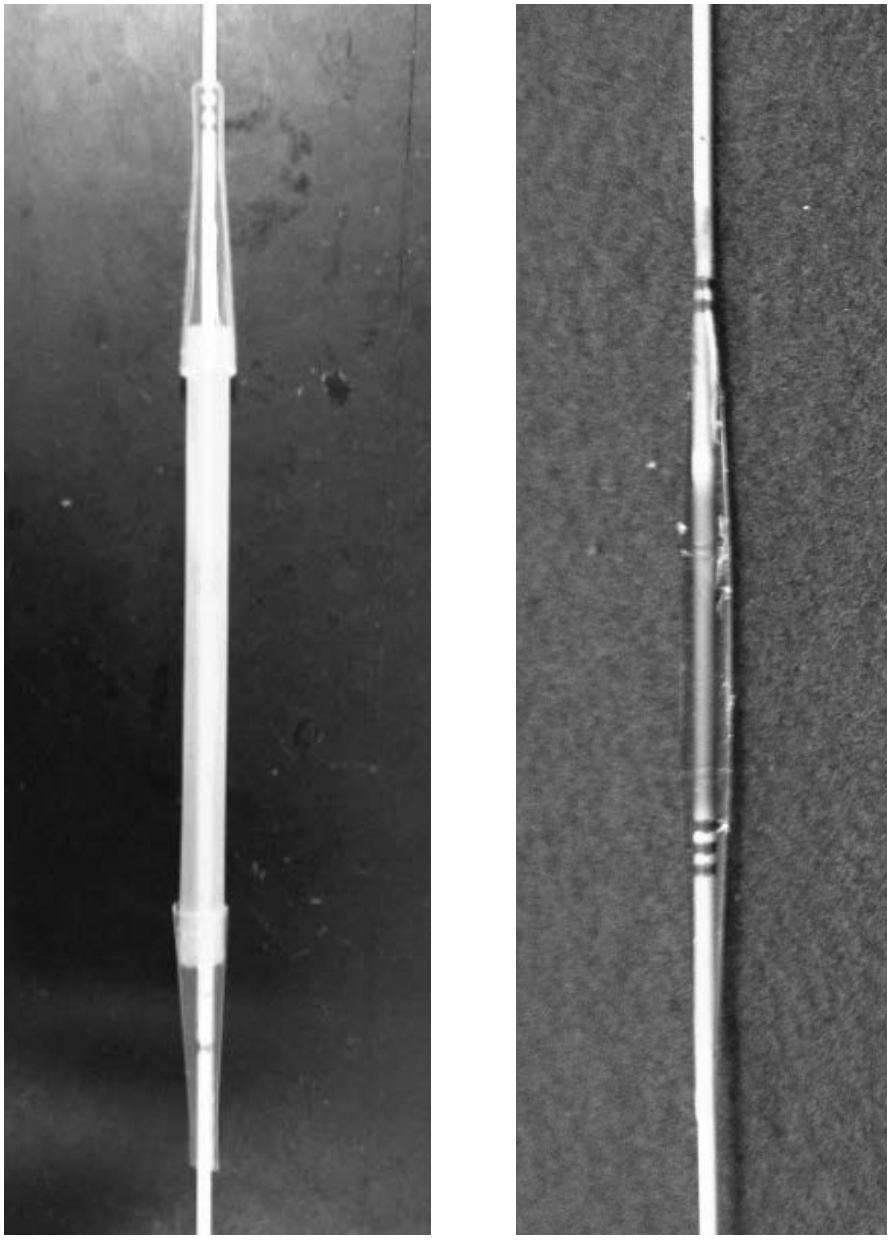

Effect of MMC-eluting ureteral stents on fibroblast inhibition
CF
30000
25000
20000
15000
10000
5000
0
1
2
3
4
5
Samples

FIG. 17

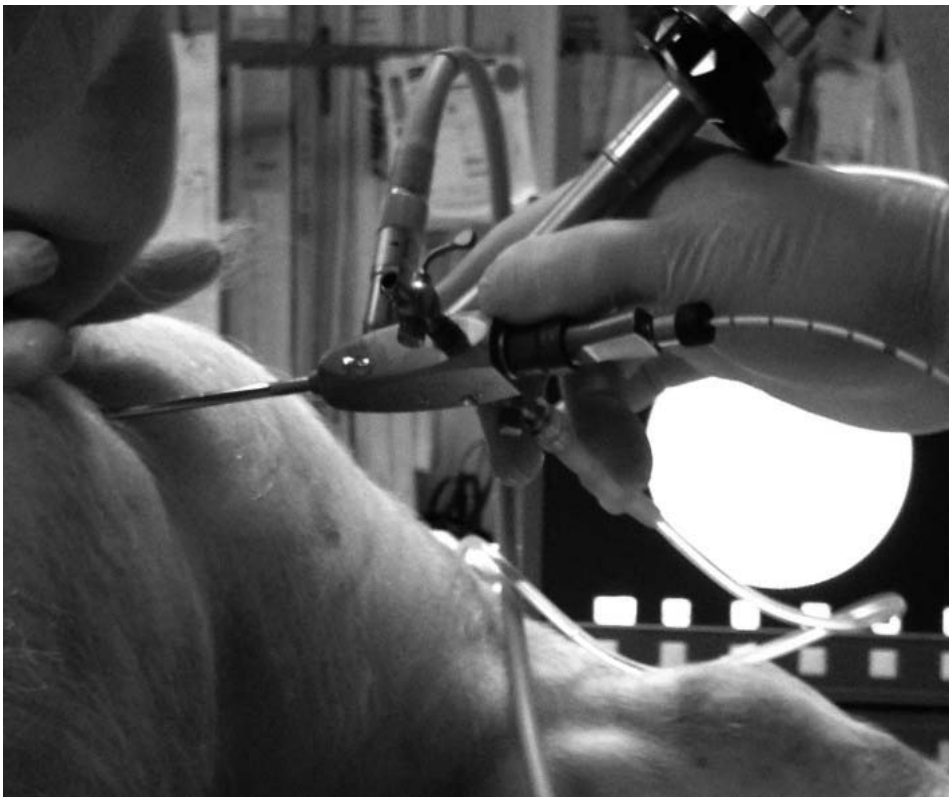


(A)

(B)

FIG. 18

(A)



(B)

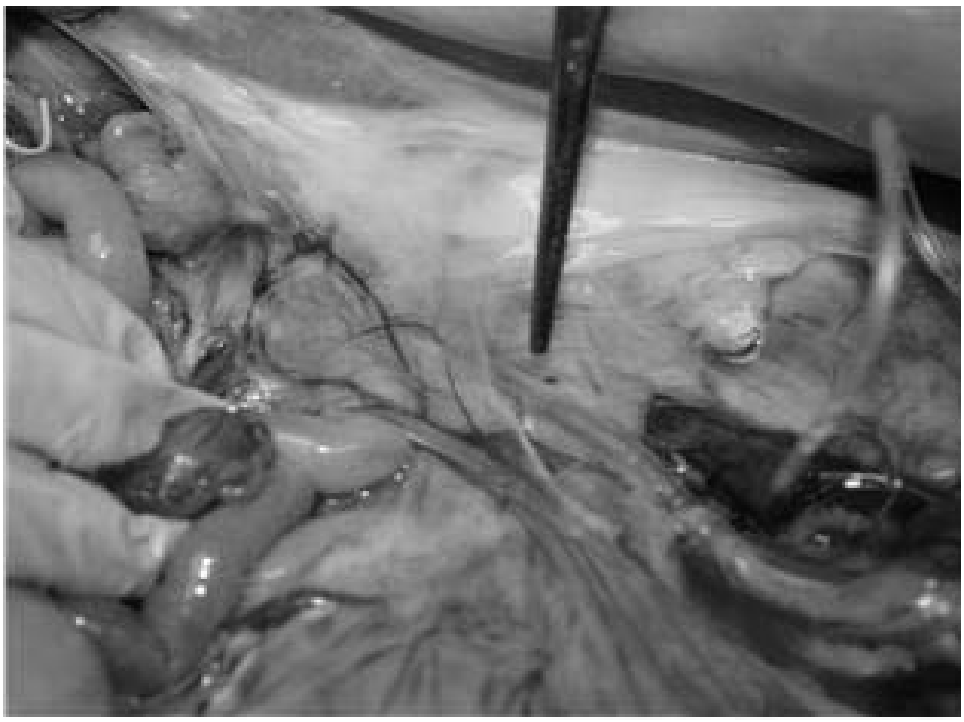
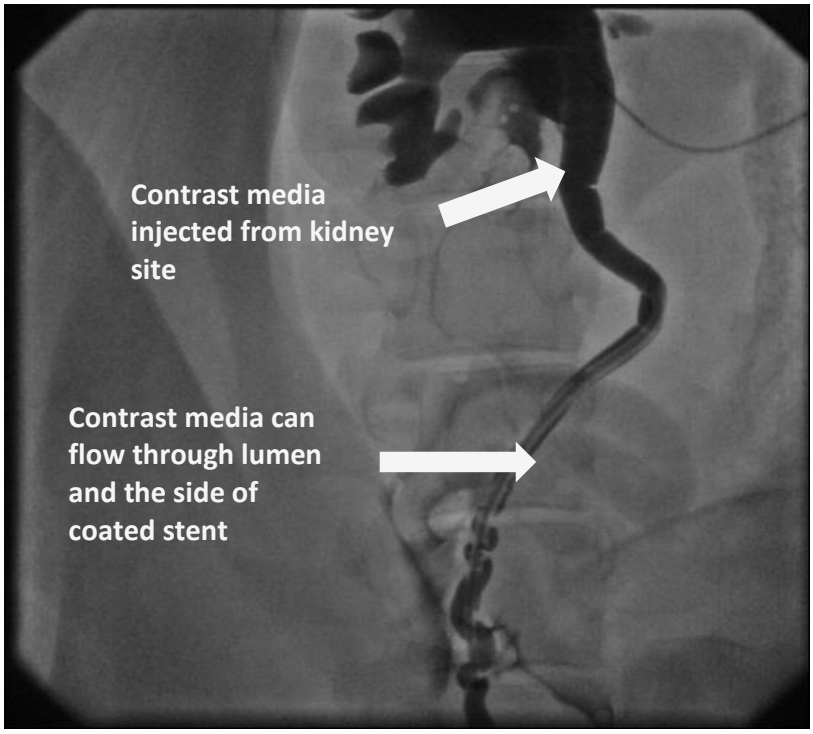


FIG. 18 (Cont.)

(C)



(D)

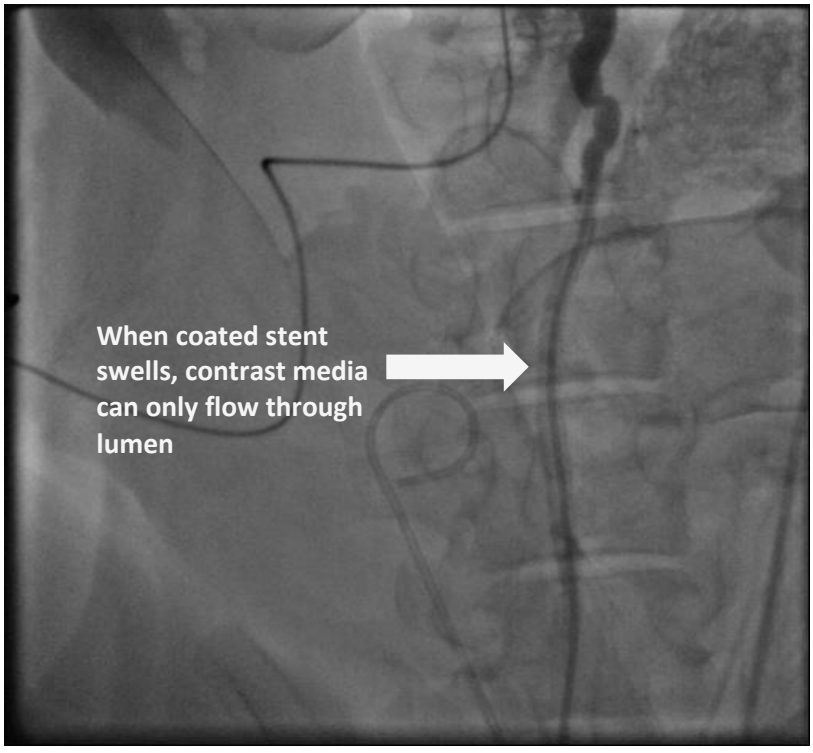


FIG. 18 (Cont.)

(E)

