Figure 1

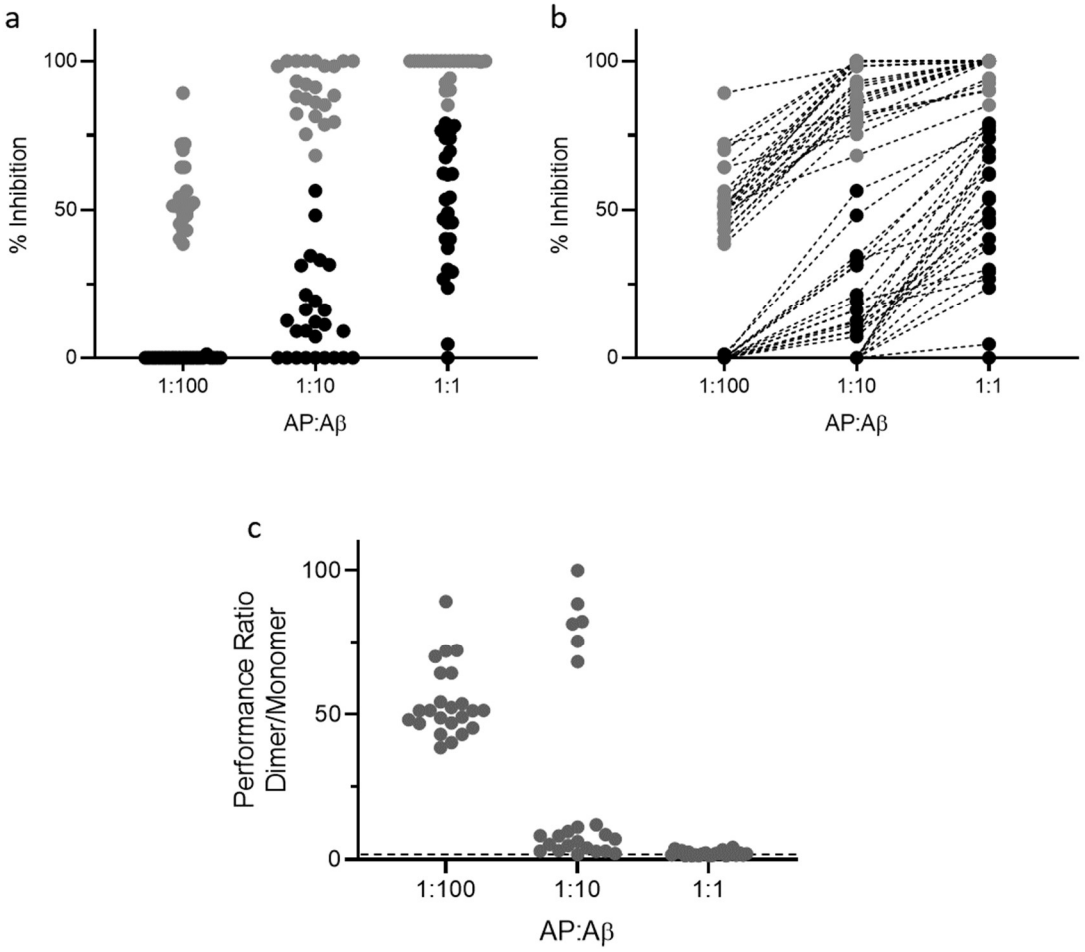

a
100
50
0
% Inhibition
1:100
1:10
1:1
AP:Aβ
b
100
50
0
% Inhibition
1:100
1:10
1:1
AP:Aβ
c
100
50
0
Performance Ratio
Dimer/Monomer
1:100
1:10
1:1
AP:Aβ

Figure 2

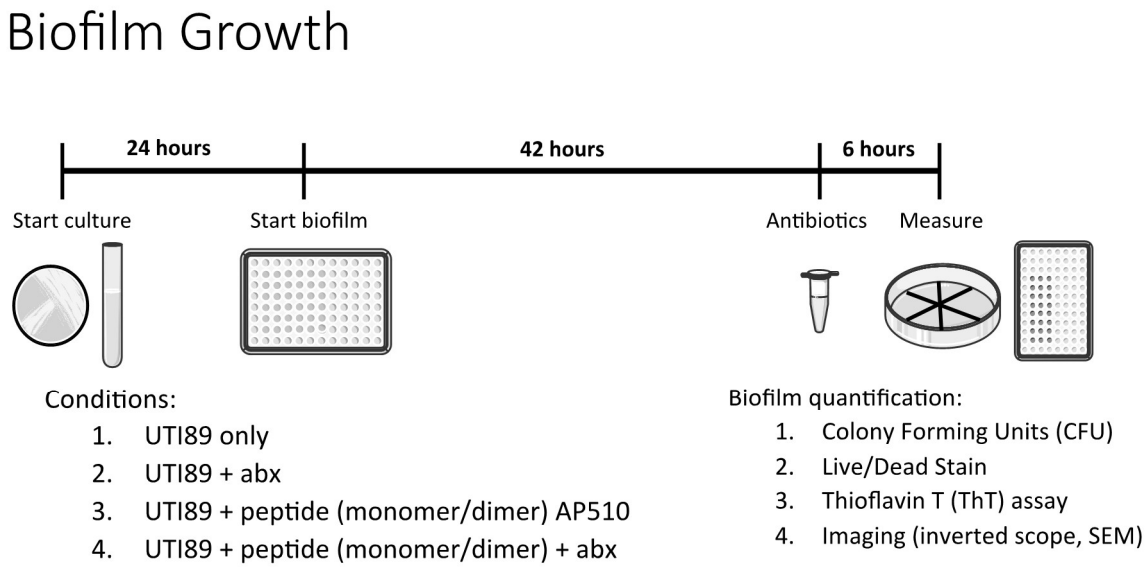

Biofilm Growth
24 hours
42 hours
6 hours
Start culture
Start biofilm
Antibiotics
Measure
Conditions:
1. UTI89 only
2. UTI89 + abx
3. UTI89 + peptide (monomer/dimer) AP510
4. UTI89 + peptide (monomer/dimer) + abx
Biofilm quantification:
1. Colony Forming Units (CFU)
2. Live/Dead Stain
3. Thioflavin T (ThT) assay
4. Imaging (inverted scope, SEM)

Figure 3

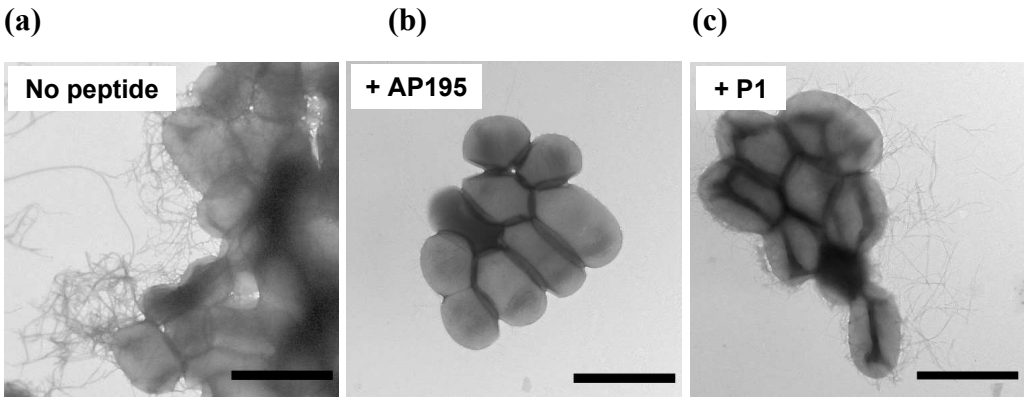


Figure 4

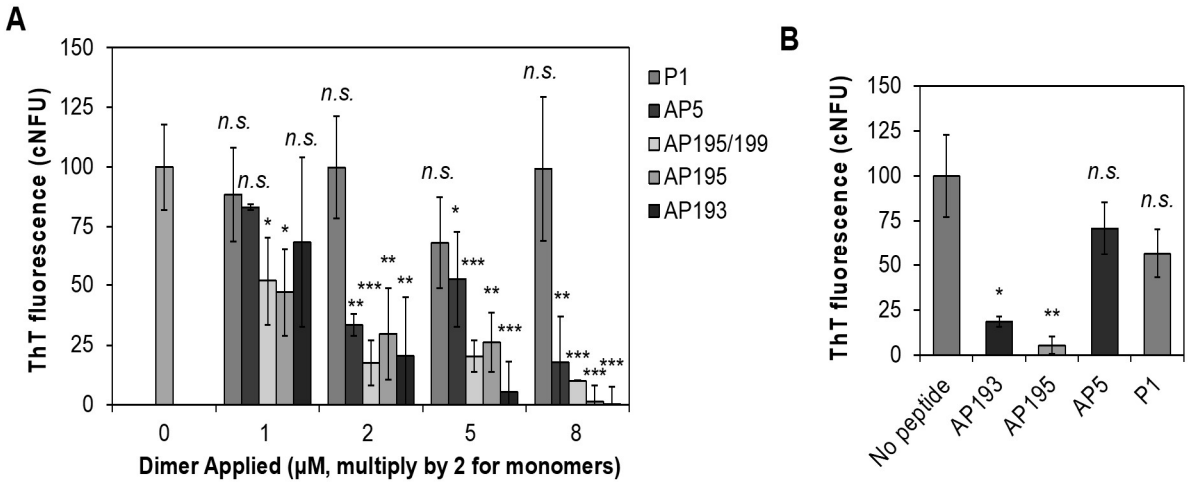

A
ThT fluorescence (cNFU)
150
125
100
75
50
25
0
n.s.
n.s.
n.s.
n.s.
n.s.
n.s.
*
*
**
***
**
*
***
**
**
***
***
***
0
1
2
5
8
Dimer Applied (μM, multiply by 2 for monomers)
P1
AP5
AP195/199
AP195
AP193
B
ThT fluorescence (cNFU)
150
125
100
75
50
25
0
*
**
n.s.
n.s.
No peptide
AP193
AP195
AP5
P1

Figure 5

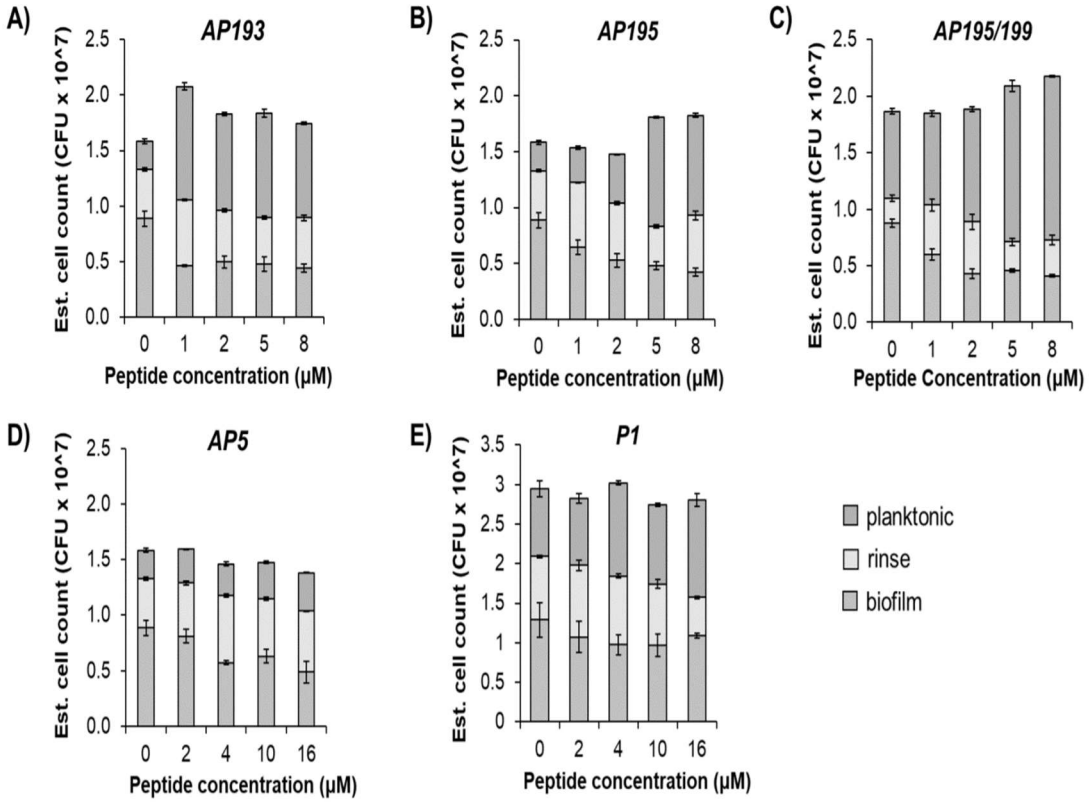


Figure 6

(a) **(b)**

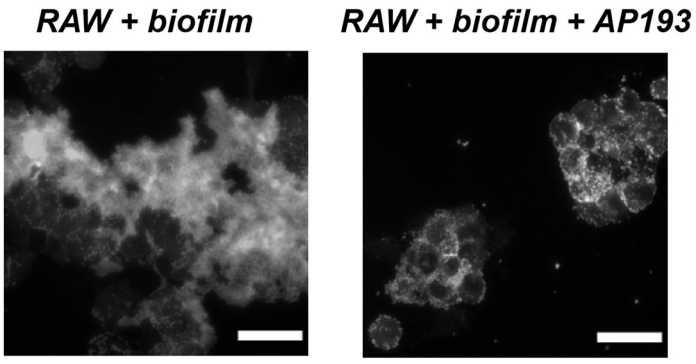


Figure 7

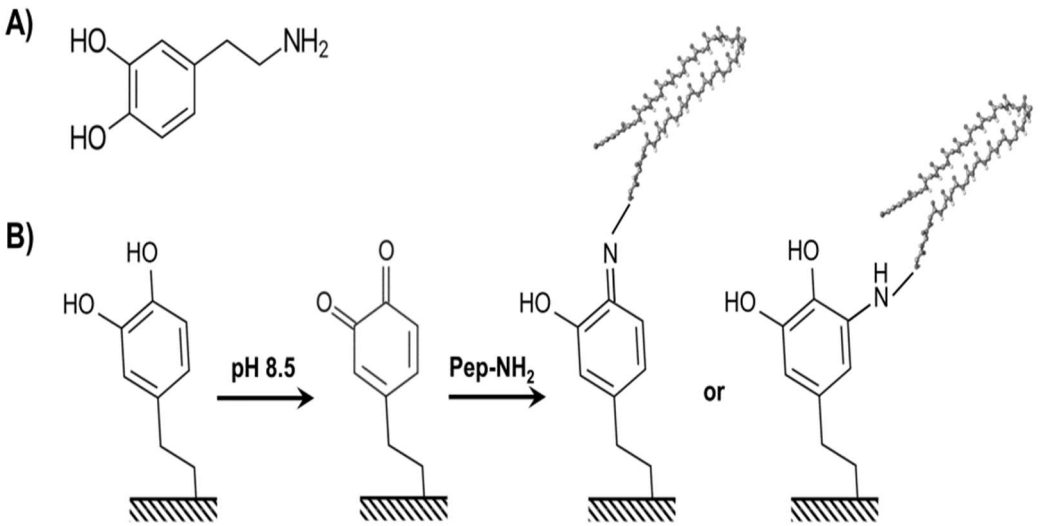


Figure 8

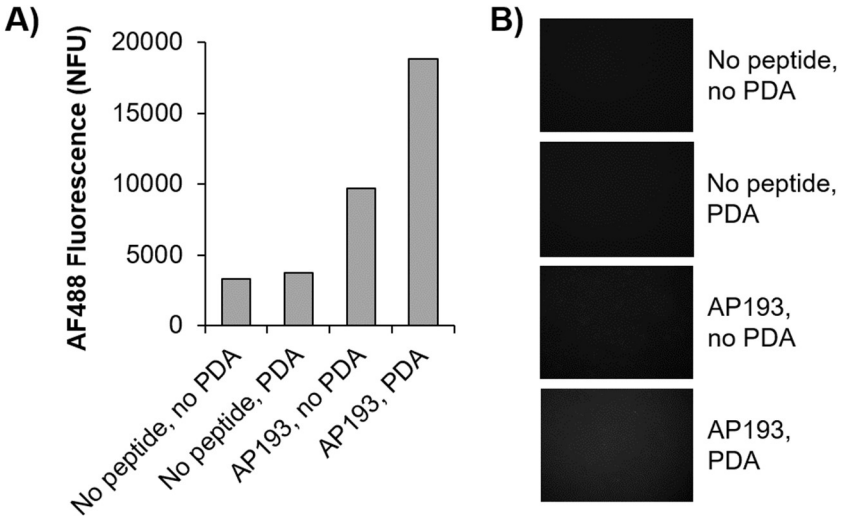


Figure 9

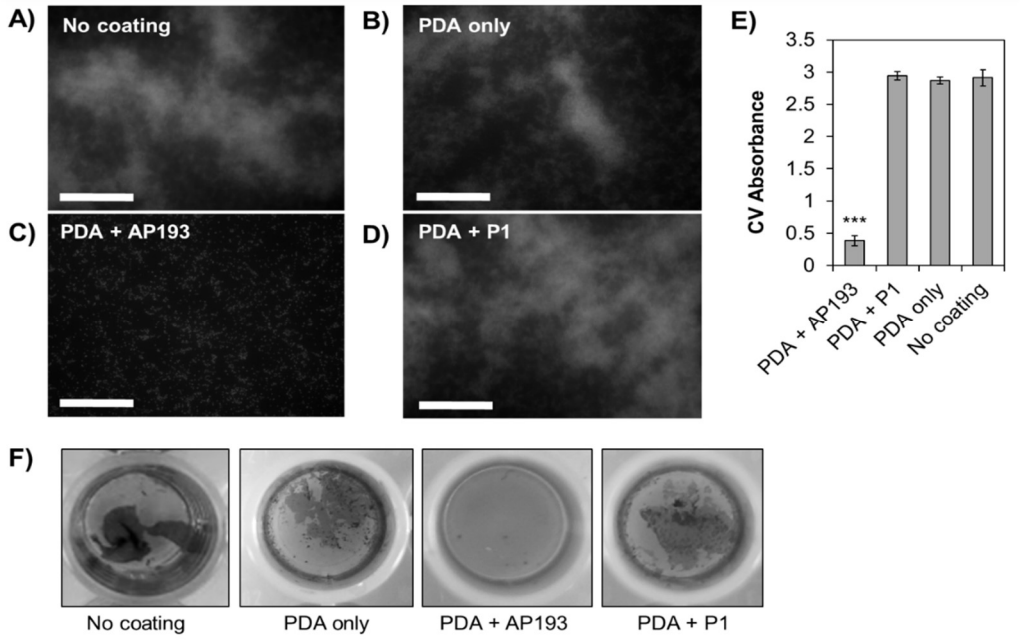


Figure 10

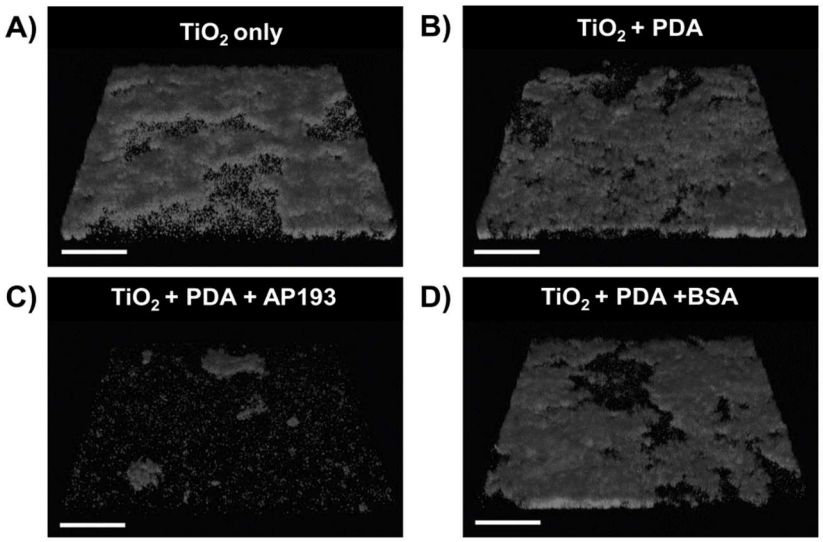


Figure 11

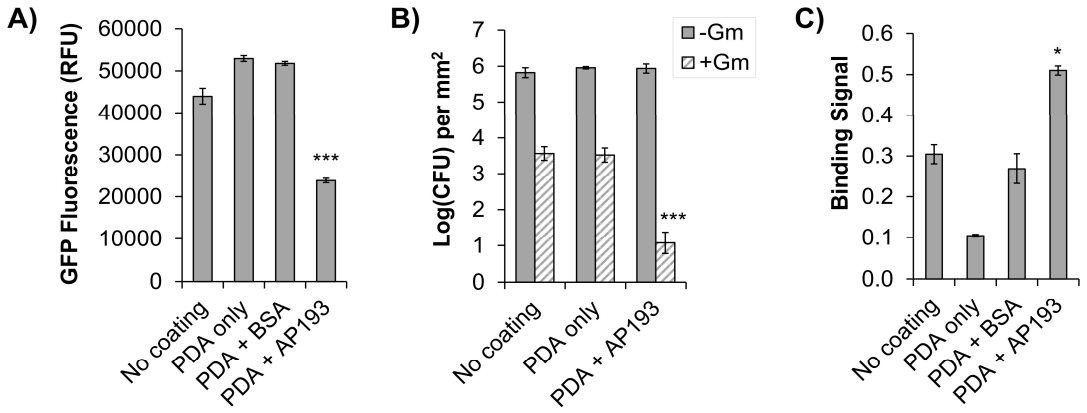


Figure 12

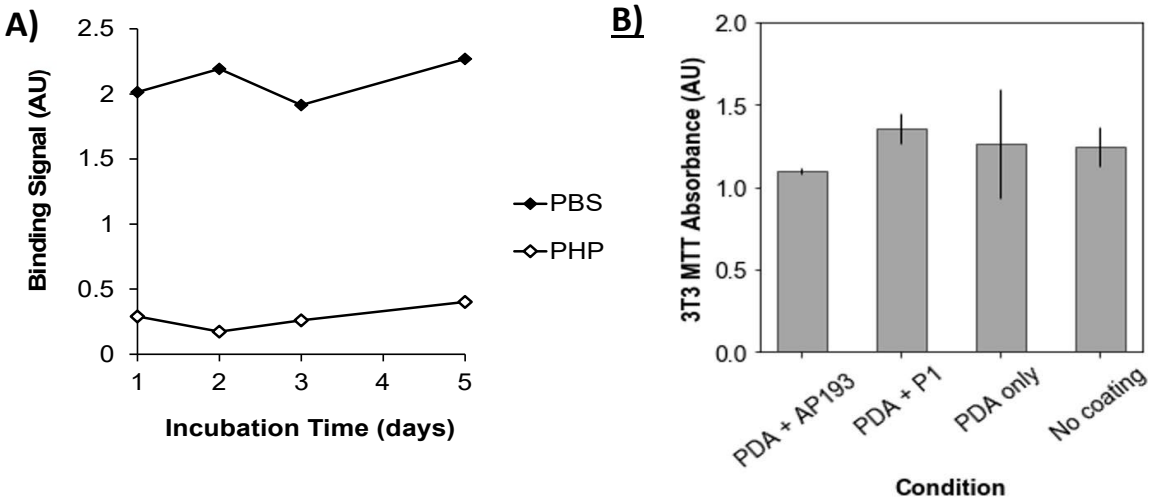


Figure 13

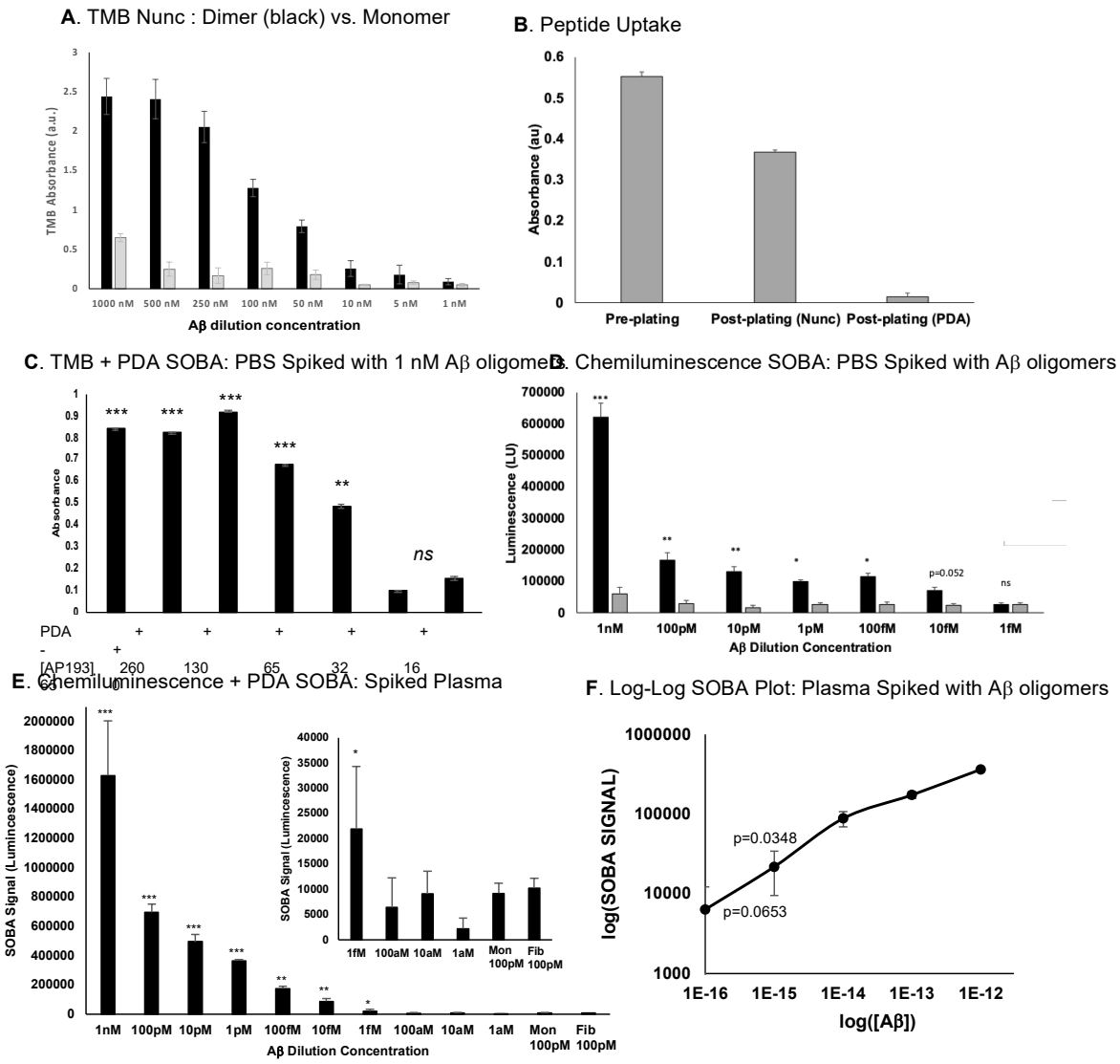

A. TMB Nunc : Dimer (black) vs. Monomer
TMB Absorbance (a.u.)
1000 nM 500 nM 250 nM 100 nM 50 nM 10 nM 5 nM 1 nM
Aβ dilution concentration
B. Peptide Uptake
Absorbance (au)
Pre-plating
Post-plating (Nunc)
Post-plating (PDA)
C. TMB + PDA SOBA: PBS Spiked with 1 nM Aβ oligomers
Absorbance
ns
PDA
[AP193]
260
130
65
32
16
D. Chemiluminescence SOBA: PBS Spiked with Aβ oligomers
Luminescence (LU)
p=0.052
ns
1nM 100pM 10pM 1pM 100fM 10fM 1fM
Aβ Dilution Concentration
E. Chemiluminescence + PDA SOBA: Spiked Plasma
SOBA Signal (Luminescence)
1fM 100aM 10aM 1aM Mon 100pM Fib 100pM
Aβ Dilution Concentration
F. Log-Log SOBA Plot: Plasma Spiked with Aβ oligomers
log(SOBA SIGNAL)
p=0.0348
p=0.0653
1E-16 1E-15 1E-14 1E-13 1E-12
log([Aβ])

Figure 14

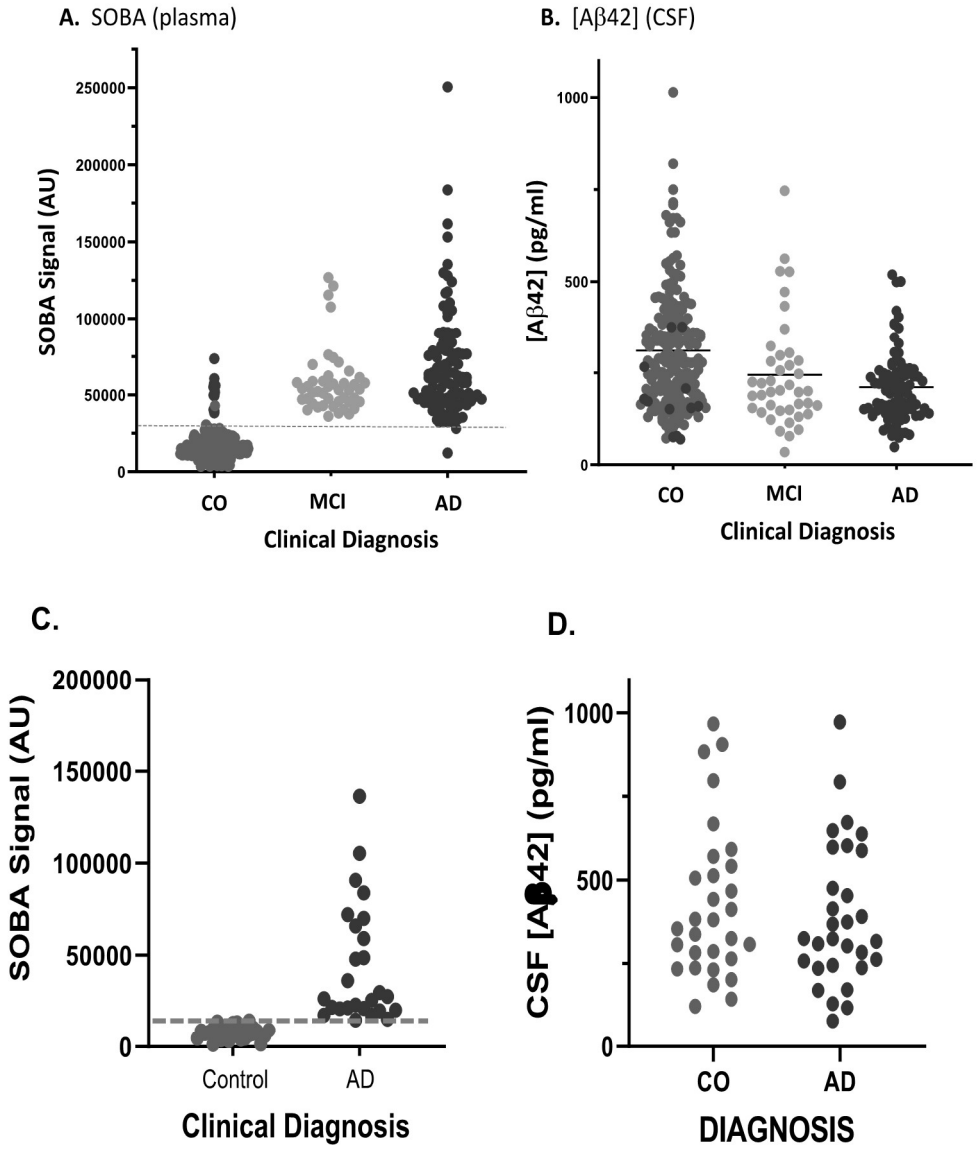

A. SOBA (plasma)
SOBA Signal (AU)
250000
200000
150000
100000
50000
0
CO
MCI
AD
Clinical Diagnosis
B. [Aβ42] (CSF)
[Aβ42] (pg/ml)
1000
500
0
CO
MCI
AD
Clinical Diagnosis
C.
SOBA Signal (AU)
200000
150000
100000
50000
0
Control
AD
Clinical Diagnosis
D.
CSF [Aβ42] (pg/ml)
1000
500
0
CO
AD
DIAGNOSIS
E.
SOBA-PD
CSF n=37
CO
PC-PD/LBD
AD
PD
SOBA Signal (AU)
300000
250000
200000
150000
100000
50000
0
PC-PD/LBD
PC-LBD
CO
AD
PD
Clinical Diagnosis

Figure 15

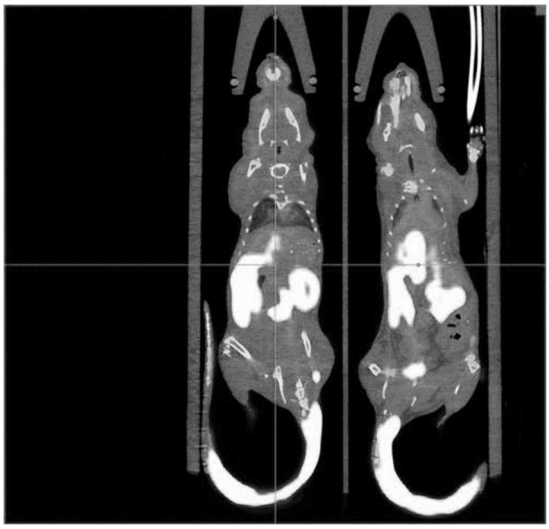


Figure 16

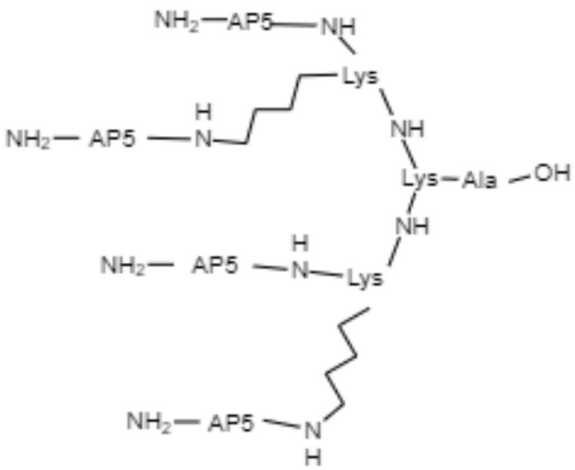


Figure 17

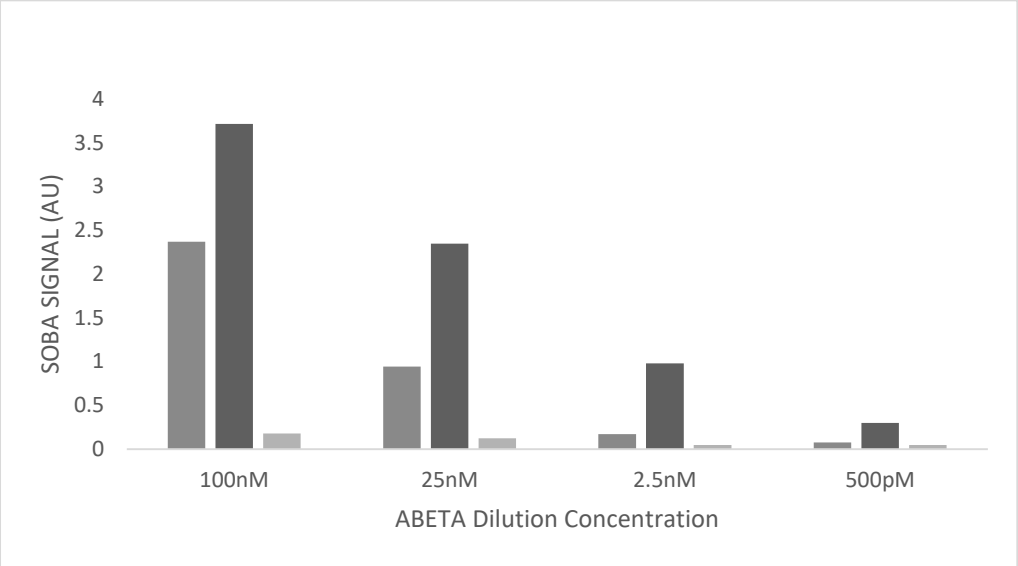


Figure 18

