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Electronic Supplementary Information

A New Type of Biocompatible Fluorescent Probe AFN for Fixed and Live Cell Imaging of Intracellular Lipid Droplets

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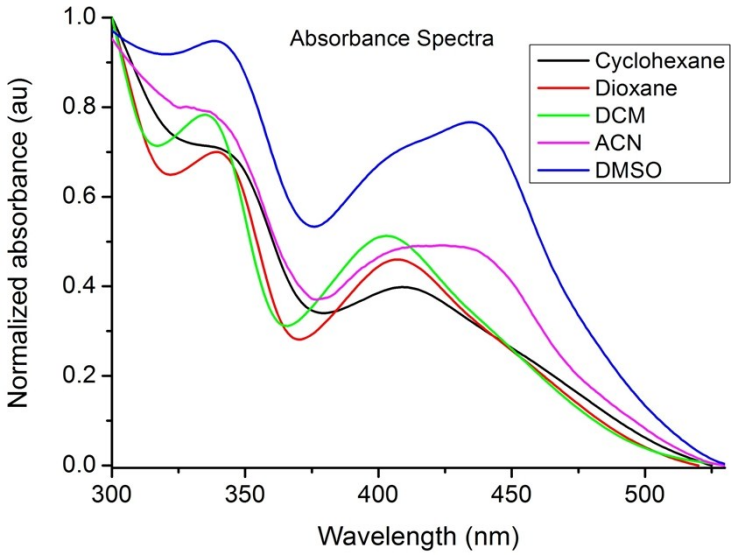
Photophysical properties of Synthesized azafluorenes and azafluorenone 8-10.

Analytical grade DMSO and Triple Distilled Water (TDW) was used for preparing all analytical samples and subsequent dilutions were made using PBS (pH=7.4) to prepare final concentration of 10^{-5} M. Absorption, Excitation and Emission spectra were recorded using UV-vis and fluorescence spectrophotometer with slit width of 1.5 nm.

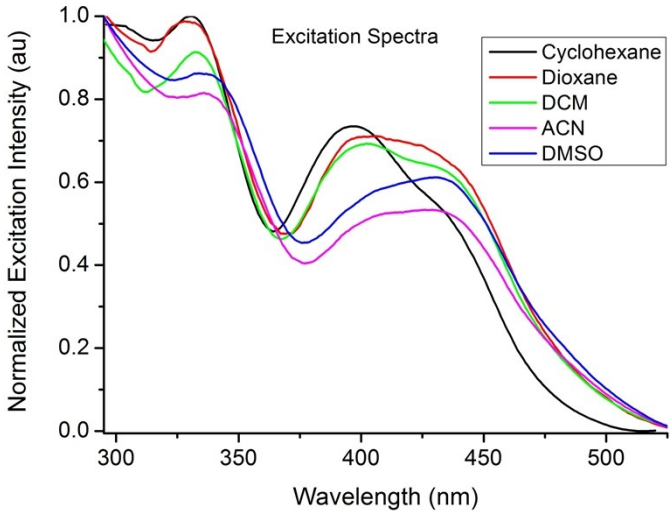
Table S1: Photophysical data of 8-10 in PBS (pH=7.4) and DMSO.

entry	PBS (pH=7.4)					DMSO				
	$\lambda_{max;\ abs}$ (nm)	$\lambda_{max;\ ex}$ (nm)	$\lambda_{max;\ em}$ (nm)	Stokes Shift (nm)	Φ_f^* (%)	$\lambda_{max;\ abs}$ (nm)	$\lambda_{max;\ ex}$ (nm)	$\lambda_{max;\ em}$ (nm)	Stokes Shift (nm)	Φ_f^* (%)
8	385	382	478	93	2.6	375	380	479	104	31
9	430	429	575	145	2.1	432	428	592	160	17
10	352	351	465	113	1.4	352	356	477	125	18
*Fluorescence quantum yield in water relative to harmine in 0.1 M H_2SO_4 as a standard (Φ_f = 45 %)										

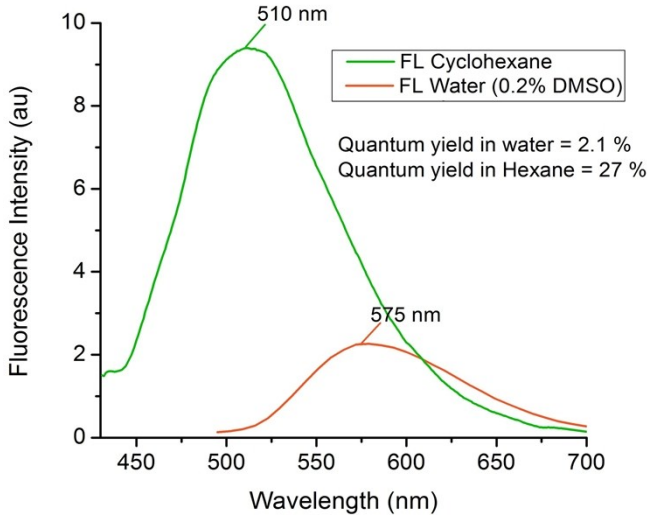
Figure S1. Absorbance spectra of AFN in different solvents.



Excitation spectra of AFN in different solvents.



Emission spectra of AFN in cyclohexane and water.



Cartesian coordinates (Å) of AFN optimized at the B3LYP/6-31G(d,p) using Gaussian 09 package

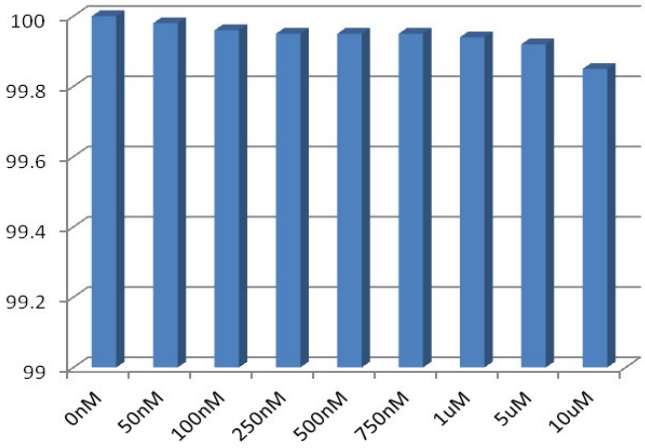
Energy: -1165.49077516 a.u.

Atom	X	Y	Z
C	-1.47587900	0.27518700	0.00120700
C	-0.92055000	-1.01009100	0.00241400
C	1.29734500	-0.05085400	0.01226500
C	0.72032300	1.26981600	0.00515700
C	-0.67437000	1.43227500	0.00149200
H	-1.57859800	-1.87189700	-0.00264700
C	2.75971400	0.06364500	0.01250000

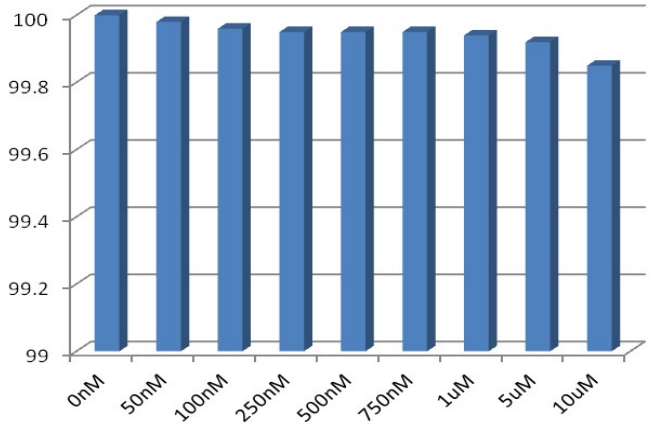
C	3.03064500	1.50627600	0.01663100
C	4.27357500	3.41925000	0.00938100
C	3.12259200	4.23159400	-0.00247000
C	1.85997400	3.63646100	-0.00472000
C	1.80295400	2.23918000	0.00331600
H	5.25773700	3.88387900	0.00818100
H	3.22776700	5.31117800	-0.00867400
H	0.96560400	4.24921200	-0.01149900
C	1.00158200	-2.59007600	0.00268700
C	1.31245700	-3.22999600	-1.20769000
C	1.15141400	-3.30022600	1.20402100
C	1.77483500	-4.54848900	-1.21517400
H	1.19532400	-2.69171100	-2.14408100
C	1.61585100	-4.61805100	1.19643600
H	0.90949600	-2.81695700	2.14651300
C	1.92985200	-5.24592200	-0.01306700
H	2.01227900	-5.02921300	-2.15956800
H	1.72944200	-5.15273800	2.13495700
H	2.28927700	-6.27083500	-0.01900500
C	-3.62804100	0.48930700	1.26090400
C	-3.61510000	0.48047000	-1.27278500
C	-4.95702300	-0.28280900	1.24239800
H	-3.81804200	1.56371800	1.41359700
H	-2.95746500	0.15834800	2.05358300
C	-4.94440100	-0.29031700	-1.26538800
H	-3.80202300	1.55499900	-1.43237000
H	-2.93667900	0.14580600	-2.05701400
C	-5.77217300	0.02402200	-0.01657700
H	-5.50246800	-0.01410100	2.15076200
H	-4.73942500	-1.35513600	1.29830000
H	-5.47994400	-0.02698400	-2.18114900
H	-4.72625600	-1.36295900	-1.31235000
H	-6.68756400	-0.57503100	-0.01911000
H	-6.07662500	1.07821900	-0.02143700
N	-2.90351100	0.38610600	-0.00188300

N	4.24954200	2.08190600	0.02214000
C	-1.28369900	2.72105400	-0.00144400
N	-1.81741600	3.75613600	-0.00450800
C	0.46835400	-1.19050700	0.00766000
O	3.61455900	-0.86675300	0.02223000

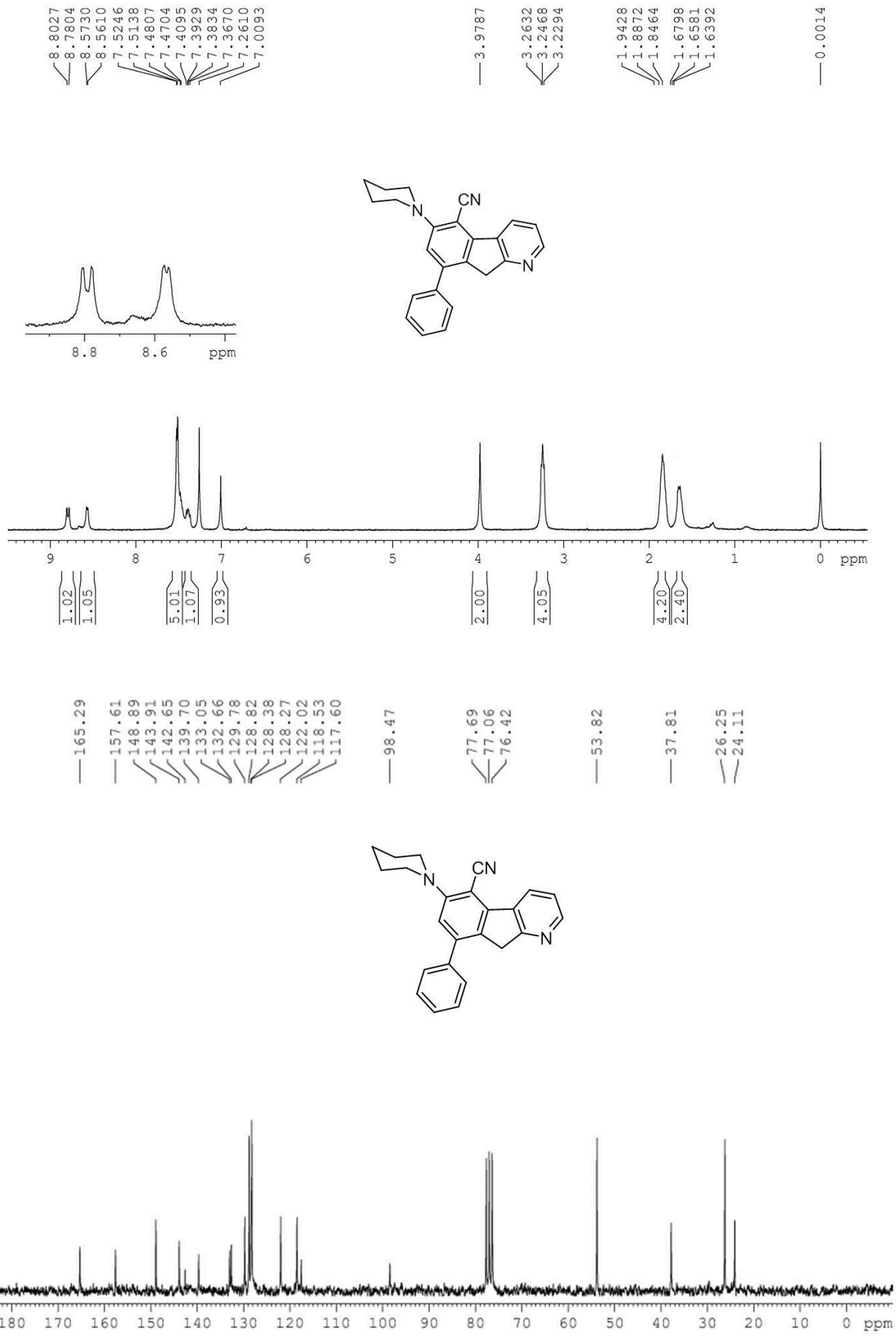
Figure S2: Cell viability assessment of AFN in HeLa cells



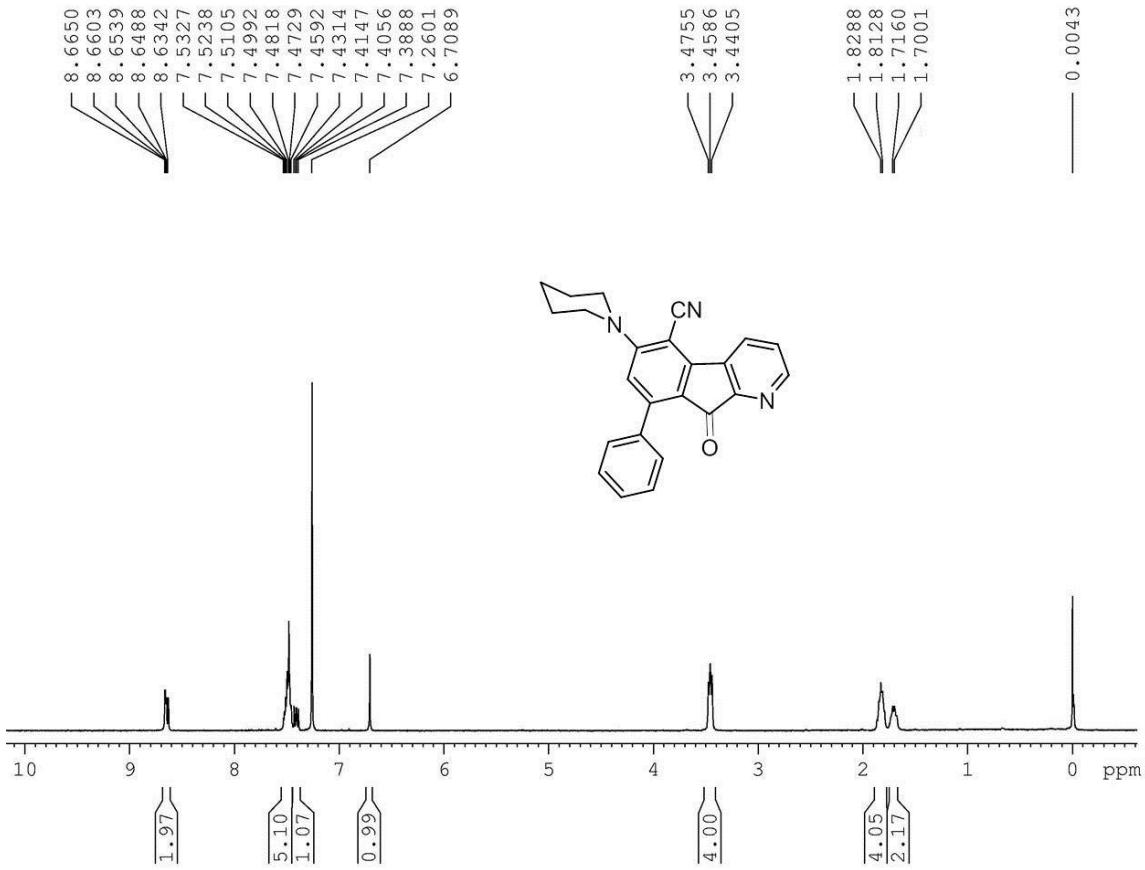
Cell viability assessment of AFN in 3T3-L1 adipocytes.

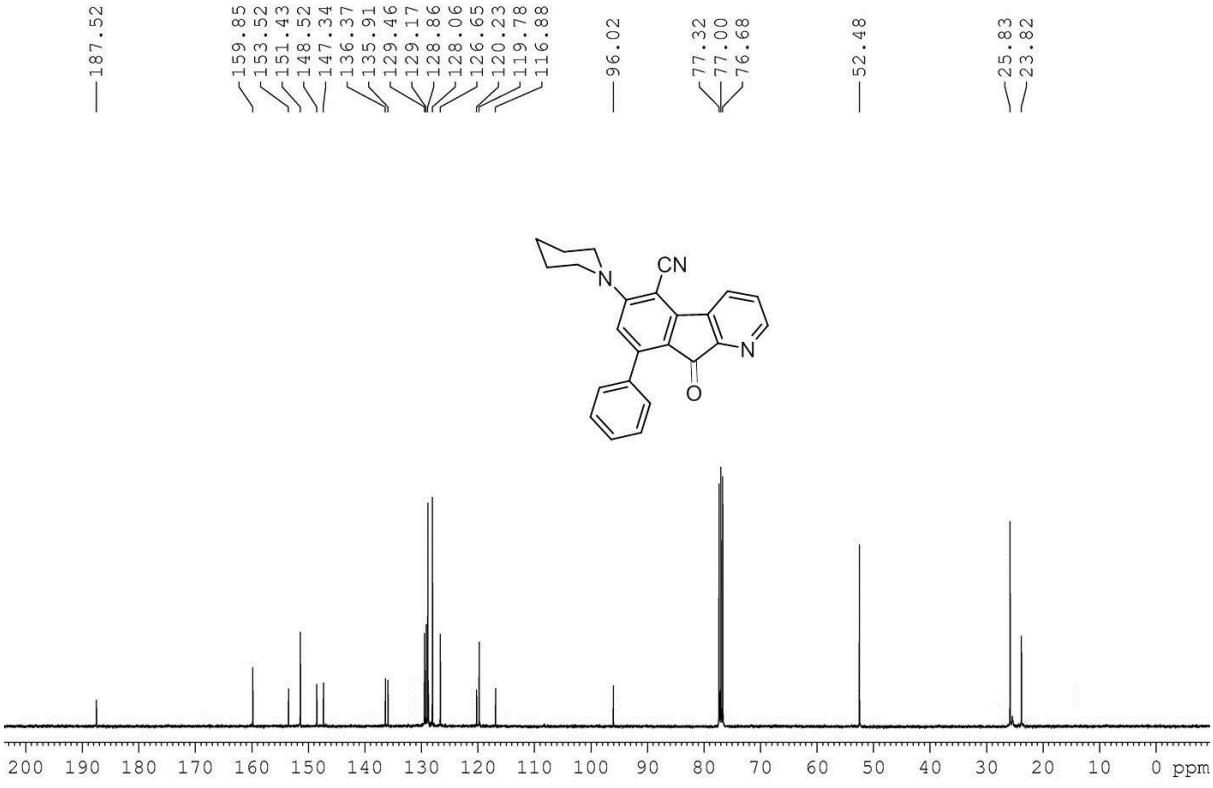


^{1}H and ^{13}C NMR of 8



^{1}H and ^{13}C NMR of 9





^{1}H and ^{13}C NMR of 10