Supplementary information

Dendrimers with far-red NDI fluorescent core for efficient and traceable gene and RNA delivery

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1. Methods and materials

1.1 General procedures

All reagents and solvents were procured from Spectrochem or Merck and used without further purification. Dulbecco's Modified Eagle Medium/Nutrient Mixture F-12 (Cat #11320033), Roswell Park Memorial Institute (RPMI) 1640 (Cat #11835030), fetal bovine serum (FBS) (Cat #10270106), penicillin-streptomycin (PS) (Cat #15140122), and Anti-Anti (Antibiotic-Antimycotic) (Cat #15240062) were obtained from Gibco (ThermoFisher Scientific). Sterilized plastic wares for cell cultures were purchased from Nunc (ThermoFisher Scientific) and used directly. Rabbit-origin GPX4 polyclonal antibody was purchased from ELABS Science (Cat. no. E-AB-64550), and the HRP-conjugated secondary antibody (goat origin) was also purchased from Invitrogen and used according to the manufacturer's protocol. TNFα (D2D4) (#11948S) was purchased from cell signaling technologies and IL-6

Mica discs for AFM studies were purchased from Ted Pella and used directly. Agilent Cary series UV-vis-NIR absorption and Agilent Cary Eclipse fluorescence spectrophotometers, along with a SpectraMax i3x microplate reader, were utilized to monitor the absorbance and fluorescence properties of the dendrimer. Purity and mass analysis were performed using gel permeation chromatography (GPC) with a Shimadzu (SPD-M20A) GPC instrument, equipped with a refractive index detector (RID-10A) and a PL gel polystyrene-co-divinylbenzene (MiniMix-C 250x4.6 mm) gel column. ^{1}H and ^{13}C NMR spectra were recorded using Bruker AV-400 and JEOL 600 MHz spectrometers, with tetramethylsilane (TMS) as an internal standard. High-resolution mass spectra were recorded with an Agilent 6538 UHD HRMS/Q-TOF high-resolution spectrometer. Confocal imaging was performed using an Olympus Fluoview 3000 confocal laser scanning microscope, with image processing conducted via inbuilt software. Fluorescence imaging was carried out with a Leica DMi8 microscope equipped with a live cell imaging setup, and images were processed using Huygens software. Bruker atomic force microscopy was performed to study nanoscale resolution. All data were quantified using ImageJ software and plotted using Origin 8.5 and Graphpad Prism 8.0.

1.2 Synthetic procedure

1.2.1 Synthesis of NDI G0 Boc (3) In a 100 mL round bottom flask 4,9-dibromoisochromeno[6,5,4]isochromene-1,3,6,8-tetraone **2** (427.31 mg, 1.0 mmol) was added in toluene (5 mL). To this, a suspension of tert-butyl (2-aminoethyl)carbamate was added (1.1

g, 4.4 mmol) and the reaction mixture was refluxed for 16 h. After completion of the reaction, the solvent was evaporated under reduced pressure. The product was purified using column chromatography using DCM: MeOH (98:2) as eluant. The product is obtained as blue coloured solid. Yield: 45% ^{1}H NMR (400 MHz, $CDCl_3$) δ 9.25 (m, 2H), 7.76 (m, 2H), 5.40 (d, 4H), 4.21 (m, 4H), 3.54 (m, 12H), 1.49 (m, 18H), 1.25 (m, 18H). HRMS (ESI-TOF) calculated for $C_{42}H_{60}N_8O_{12}$ $[M+Na]^+$ 891.4223, observed 891.4273.

1.2.2 Synthesis of NDI G0 (4) The **NDI G0** Boc derivative **3** (500 mg, 579.39 mmol) was dissolved in 1:1 TFA: DCM and allowed to stir at RT for 3 h and the reaction was monitored using TLC using DCM: MeOH as eluent. After 3 h, the excess TFA: DCM was evaporated under reduced pressure, to yield a sticky dark blue solid. The crude product was washed multiple times with DCM to yield pure **NDI G0** (**4**) core that was further used for dendrimer divergent synthesis. Yield 85% ^{1}H NMR (400 MHz, DMSO-d_6) δ 9.37 (s, 2H), 8.11 (m, 2H), 8.07 (m, 8H), 4.35 (m, 4H), 3.85 (m, 4H), 1.49 (m, 18H), 3.18 (m, 8H). ^{13}C NMR (100 MHz, DMSO-d_6): δ 165.6, 162.6, 158.4, 158.1, 148.2, 125.8, 120.9, 118.6, 117.5, 115.6, 102.3, 37.9, 37.5, 37.4. HRMS (ESI-TOF) calculated for $C_{22}H_{28}N_8O_4$ $[M+H]^+$ 469.2306, observed 469.2279

1.2.2 Synthesis of NDI G0.5 (5) NDI G0 (4) (800 mg, 1.70 mmol) dissolved in MeOH was allowed to stir at RT with methyl acrylate (5 equivalent per amine) for 48 h and the reaction was monitored using TLC using DCM: MeOH as eluent. The excess of methyl acrylate was evaporated to yield crude **NDI G0.5 (5)**. The reaction was purified using column chromatography using DCM: MeOH as eluent. Yield 87 %. ^{1}H NMR (400 MHz, DMSO) δ 9.31 (s, 1H), 7.94 (s, 1H), 6.76 (d, 2H), 4.3 (m, 4H), 3.72 (m, 20H), 3.65 (m, 2H), 3.41 (m, 14H), 3.12 (m, 7H), 3.05 (m, 7H), 2.7 (m, 4H), 2.62 (m, 4H). ^{13}C NMR (100 MHz, DMSO-*d6*): δ 172.3, 171.9, 165.3, 162.7, 153.1, 150.6, 148.6, 125.3, 121.0, 118.1, 116.0, 115.2, 114.7, 101.7, 55.8, 55.7, 52.6, 51.8, 51.7, 45.6, 40.3, 31.8, 31.1, 8.4, 7.7. MALDI (TOF) calculated for $C_{54}H_{77}N_8O_{20}$ $[M]^+$ 1157.52, observed 1157.27.

1.2.3 Synthesis of NDI G1 (**6**). **NDI G0.5** (600 mg, 0.51 mmol) was dissolved in MeOH to which excess of ethylenediamine (20 equiv per ester surface group) was added and the reaction was stirred under RT for 48 h and the completion of the reaction was monitored with TLC. The excess of ethylenediamine was evaporated to obtain crude **NDI G1.** The crude product was washed several times in DCM to obtain pure NDI G1. Yield 78%. ^{1}H NMR (400 MHz, DMSO-*d6*) δ 8.00 (m, 8H), 6.74 (s, 1H), 6.65 (s, 1H), 3.65 (m, 4H), 3.16 (m, 12H), 3.05 (m, 18H), 2.87

(m, 15H), 2.78 (m, 38H), 2.20 (m, 16H). ^{13}C NMR (101 MHz, D_2O) δ 175.9, 171.1, 170.4, 165.3, 164.7, 160.3, 117.8, 114.9, 78.5, 75.6, 70.8, 52.8, 50.9, 48.2, 47.6, 47.2, 42.2, 41.3, 40.8, 40.3, 39.5, 39.3, 39.1, 39.0, 38.8, 37.1, 36.0, 32.6, 30.9, 7.0. MALDI (TOF) calculated for $C_{62}H_{108}N_{24}O_{12}$ $[M]^+$ 1380.85, observed 1380.91.

1.2.3 Synthesis of NDI G2 (8). NDI G1 (400 mg, 0.28 mmol) was dissolved in MeOH and reacted with excess methyl acrylate (6 equivalent per amine) for 72 h at RT and the reaction was monitored with TLC using DCM: MeOH as eluent. Post completion, the excess methyl acrylate was evaporated to obtain **NDI G1.5** (7). Subsequently, **NDI G1.5** (7) (300 mg, 0.10 mmol) was reacted with excess of ethylenediamine (25 equivalent per ester) for 48 h at RT and the reaction was monitored for completion with TLC using DCM: MeOH as eluents. The excess ethylenediamine was evaporated to obtain crude **NDI G2** (8). **NDI G2** (8) was purified using HPLC using acetonitrile: water system. Yield 63 %. ^{1}H NMR (400 MHz, D_2O) δ 6.86 (m, 1H), 6.75 (m, 1H), 3.21–3.26 (m, 61H), 2.71–2.77 (m, 70H) 2.57–2.40 (m, 41H), ^{13}C NMR (151 MHz, D2O) δ 172.6, 172.6, 172.5, 172.1, 172.0, 163.0, 162.8, 162.6, 162.3, 119.3, 117.4, 115.9, 115.5, 114.9, 113.5, 55.8, 51.7, 50.5, 50.5, 50.3, 50.1, 49.8, 48.5, 47.7, 46.9, 44.4, 44.2, 44.0, 44.0, 43.5, 43.2, 41.8, 39.1, 39.0, 36.9, 36.8, 36.5, 35.8, 34.2, 30.8, 30.8, 30.7, 28.8, 28.5, 28.4, 21.3.

1.2.4 Synthesis of NDI G3 (**10**). **NDI G2** (**8**) (200 mg, 0.093 mmol) was dissolved in MeOH and reacted with excess methyl acrylate (6 equivalent per amine) for 72 h at RT and the reaction was monitored with TLC using DCM: MeOH as eluent. Post completion, the excess methyl acrylate was evaporated to obtain **NDI G2.5** (**9**). Subsequently, **NDI G2.5** (**9**) (300 mg, 0.05 mmol) was reacted with excess of ethylenediamine (25 equivalent per ester) for 72 h at RT as monitored for completion in TLC. The crude reaction mixture was then dialyzed (3.5 kDa cutoff membrane, distilled water, 24 h). The retentate was further purified by preparative HPLC (eluent: water/acetonitrile gradient) to obtain **NDI-G3** (**10**) as the purified dendrimer. Yield 56%. ^{1}H NMR (400 MHz, D_2O) δ 8.02-7.89 (m, 2H), 3.56-3.47 (m, 18H), 3.25 (m, 139H), 2.77–2.76 (m, 190H) 2.56 (m, 88H), 2.39-2.37 (m, 128H). ^{13}C NMR (151 MHz, D_2O) δ 182.4, 175.6, 175.5, 175.4, 175.4, 175.3, 175.1, 175.0, 174.9, 174.8, 174.7, 174.6, 174.4, 164.6, 164.5, 160.7, 157.2, 122.7, 118.4, 107.5, 103.7, 97.8, 72.1, 68.5, 62.5, 62.4, 62.3, 51.2, 50.0, 59.1, 48.9, 40.4, 40.0, 39.8, 39.7, 39.4, 38.9, 38.7, 36.7, 36.6, 32.7, 32.6, 32.5, 20.1, 20.0.

1.3 UV-vis absorption spectroscopy

Measurements were conducted in Tris.HCl buffer (10 mM, pH 7.4) at room temperature. **NDI G1-3** of 10 mM stock were prepared in water and used for further experiments. For a fixed concentration **NDI G1-3**, pDNA was added to understand the change in photophysical properties. Absorption spectra were recorded in the wavelength range of 200–600 nm, using matched quartz cuvettes (1 cm path length). The slit widths for both excitation and emission were set to 5 nm to optimize resolution and signal-to-noise ratio. Baseline correction was performed using Tris buffer as the reference.

1.4 Atomic force microscopy studies

Samples were dropcasted on freshly cleaved mica discs (Agar scientific), and incubated for 15 min under room temperature, washed with DI water thrice for 5 min and dried for 1 h at 37 °C. For imaging with AFM, we used SCANASYST-AIR probe with tip radius of 5 nm and spring constant of 0.4 N/m sample at 1 Hz with 256 samples/line. Peak force Quantitative Nanomechanical Mapping in air (PGQNM) was utilized for sample scanning and Nanoscope analysis 1.8 software was utilized for processing.

1.5 Dendriplex formation

Dendriplexes were formed by incubating 100–150 ng of pDNA with **NDI G3** dendrimer (10 μM) in 10 mM Tris·HCl buffer (pH 7.4). The mixture was gently vortexed and incubated at room temperature for 30 min. to allow electrostatic complexation between the negatively charged DNA and the positively charged dendrimer. Following complex formation, the hydrodynamic diameter and zeta potential of the resulting dendriplexes were measured using a Malvern Zetasizer Nano ZS. Measurements were conducted at 25 °C in disposable cuvettes, and results were used to assess the size distribution and surface charge, confirming dendriplex formation and colloidal stability.

1.6 CD measurement

CD spectra were recorded using a Jasco J-815 spectropolarimeter equipped with a temperature-controlled cell holder and a 10 mm path length quartz cuvette. Measurements were carried out in 10 mM Tris·HCl buffer (pH 7.4) at room temperature. Plasmid DNA (pDNA, 100 μM) was analyzed both alone and in the presence of varying concentrations of **NDI G3** dendrimer to assess conformational changes upon complexation. The scan rate was set to 100 nm/min, and spectra were recorded over the relevant wavelength range for DNA structural features

1.7 Agarose gel electrophoresis

Electrophoretic mobility shift assay (EMSA) was performed to evaluate the binding interaction between pDNA and **NDI G1-G3** dendrimers. In a typical experiment, 200 ng of plasmid DNA was incubated with varying concentrations of **NDI G1-G3** in 10 mM Tris·HCl buffer (pH 7.4). The mixtures were incubated at room temperature for 30 minutes to allow complex formation. Prior to electrophoresis, 2.5 µL of loading dye (composed of 20% glycerol, 25 mM EDTA, 0.05% bromophenol blue, and xylene cyanol) was added to each sample. Samples were then loaded onto a 1% agarose gel and run for 45 minutes at 90 V in Tris–acetate–EDTA (TAE) buffer. Post-electrophoresis, the gel was stained with ethidium bromide (EtBr) by incubating for 10 min, and visualized under UV illumination in gel doc to assess DNA mobility and dendriplex formation.

1.8 DNase stability assay

The stability of **NDI G3** dendriplexes against enzymatic degradation was assessed using EMSA. pDNA (200 ng) was first incubated with **NDI G3** dendrimer (5 µM) in 10 mM Tris·HCl buffer (pH 7.4) at room temperature for 30 minutes to allow dendriplex formation. To evaluate nuclease resistance, 1 µL of DNase I (3 units/µL) was added to both pristine pDNA and dendriplex samples, followed by incubation at 37 °C for 2 h. After digestion, DNase I was heat-inactivated, and heparin (40 mg/mL) was added to the samples to displace DNA from the dendriplex. The mixture was further incubated for 10 min. at room temperature. All samples were analyzed by agarose gel electrophoresis under identical conditions as described in Section 1.7 to visualize the extent of DNA protection and release.

1.9 Cellular studies

1.9.1 Cell culture

SH-SY5Y, Caco2, and HEK-293T were cultured using DMEM-F12, and N9 cells were cultured using RPMI with 10% fetal bovine serum (FBS) and 1% pen-strep (PS) or 1% Anti-Anti and under the ambient cell growing conditions of 37 °C and 5% CO_2 atmosphere.

1.9.2 Cellular toxicity study

The HEK-293T cells were seeded in 96 well plate with a density of 25,000 cells per well and was incubated for 24 h. After that the media was changed with DMEM (2.5% FBS) and the cells were treated with **NDI G3** and further incubated for 24 h in the ambient cell growing conditions. Post 24 h, 10 µL of MTT (5 mg/mL) was added to the cells and incubated for additional 3 h followed by replacement of media with 100 µL MeOH: DMSO (1:1) to dissolve

the formazan crystals. The absorbance was measured at 570 nm with the background corrections at 640 nm.

1.9.3 Cellular transfection experiment

Cellular transfection experiments were performed to assess the ability of the nanocondensates to deliver GFP plasmid in HEK-293T. pDNA: **NDI G3** complex was prepared by adding varying concentrations of **NDI G3** to EGFP DNA (150 ng) in OptiMEM media (50 µL), vortexed gently to mix the components and allowed to equilibrate for 30 min. After 30 min we added Ca^{2+} (2 mM) to the dendriplex and incubated further for 10 min. Prior to the treatment of dendriplex, the media was replaced with that containing dendriplex Ca^{2+} composite and incubated for 16 h, post which DMEM with 10% FBS and 1% PS were added. The cells were incubated for an additional 48 h and imaged for the expression of EGFP at different regions.

1.9.4 Quantitative RT-PCR assay

Caco-2 cells were seeded in a 12-well plate at a density of 3×10^5 cells per well and incubated under standard cell growth conditions for 24 h. Following incubation, the cells were treated with varying concentrations of **NDI G3** complexed with siRNA (200 nM) in the presence and absence of Ca^{2+} and maintained for an additional 36 hours. Total RNA was then extracted using RNAiso Plus (Cat. #9108) according to the manufacturer's protocol and quantified using a Nanodrop spectrophotometer (Implen). For cDNA synthesis, 1 µg of isolated RNA was reverse transcribed using the Verso cDNA Synthesis Kit (Catalog # AB1453A) following the manufacturer's instructions. Quantitative RT-PCR was performed in a final reaction volume of 20 µL, comprising 10 µL of 2X iTaq UniverSYBR Green SMX 1000 PCR master mix (Cat. #1725122), 2 µL of cDNA, and primers at a final concentration of 100 nM. GAPDH was used as the reference gene to normalize Ct values for accurate quantification of target gene expression.

Gene	siRNA sequence	Length
GPX4	S: 5′- CUACAACGUCAAAUUCGAUAU -3′ A: 5′- AUCGAAUUUGACGUUGUAGCC -3′	21 nt

mRNA	Primer sequence	Length

GPX4	F: AGTGGATGAAGATCCAACCCAAGG R: GGGCCACACACTTGTGGAGCTAGA	24 nt
GAPDH	F: ATCATCCCTGCCTCTACTGG R: GTCAGGTCCACCACTGACAC	20 nt

1.9.5 Immunofluorescence assay

Caco-2 cells were seeded in confocal dishes and incubated under standard cell culture conditions for 24 h. Once the cells reached approximately 70% confluence, they were treated with **NDI G3** DP alone or in combination with Ca^{2+} and incubated for an additional 36 h. Following treatment, the cells were gently washed three times with warm PBS and fixed with 4% paraformaldehyde for 20 min at room temperature. After fixation, the cells were washed twice with PBS for 5 min each, followed by permeabilization with PBS containing 0.1% Triton X-100 for 10 min. The permeabilization buffer was removed, and the cells were rinsed twice with PBS, incubating for 5 min each time. The samples were then blocked using 10% horse serum (HS) in dPBS for 30 min at room temperature. After blocking, the cells were incubated with a primary antibody specific to GPX4 at a 1:200 dilution overnight at 4 °C. The following day, the cells were washed twice with PBS and incubated with a secondary antibody conjugated to Alexa Fluor-488 for 2 h at room temperature. After washing, counterstaining was performed with DAPI (1 μM) for 3 min to visualize nuclei. Imaging was conducted using a confocal microscope, and fluorescence intensity corresponding to GPX4 protein expression was quantified using ImageJ software. Similar protocol were used monitoring the inflammatory response of **NDI G3** in N9 cells.

1.9.6 Flow cytometry

HEK-293T cells were seeded in a 24-well culture plate (100,000 cells/well) followed by incubation for 24 h at 37 °C under standard cell culture conditions. After 24 h, the media was replaced with DMEMF-12 containing 2.5% FBS, either in the absence or presence of inhibitors such as sucrose (0.45 M), amiloride (50 μM), chloroquine (100 μM), methyl-β-cyclodextrin (5 mM), or colchicine (10 μM) for 45 min. Following this, **NDI G3** DP and **NDI G3** DP+ Ca^{2+} formulation was added to each well, and the cells were incubated for an additional 5 h. After incubation, the cells were gently washed with warm PBS twice to remove free **NDI G3** DP. The cells were subsequently trypsinized and centrifuged at 1000 rpm for 5 min at 4 °C. The resulting cell pellets were resuspended in 300 μL PBS and used for flow cytometry analysis.

2. Results

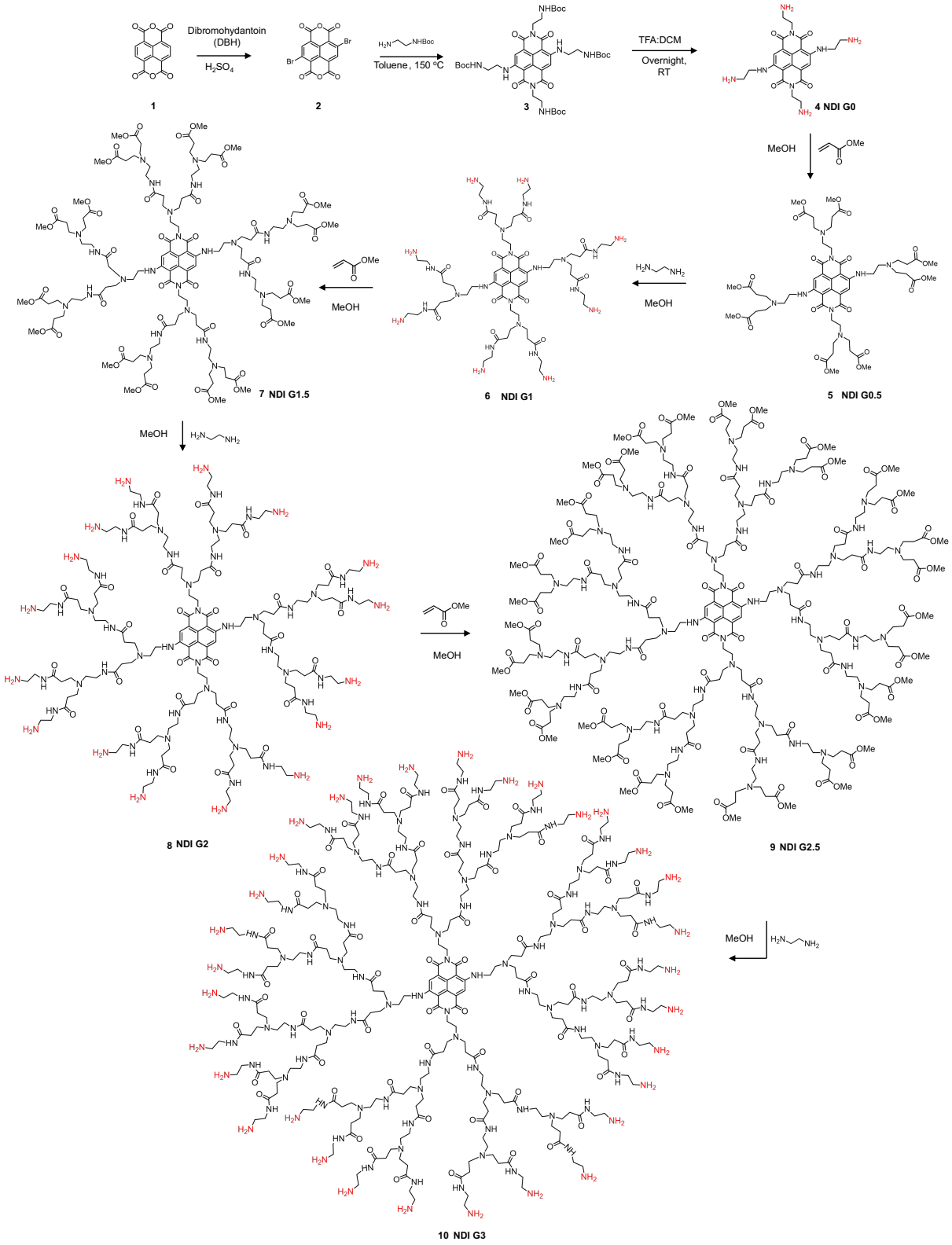


Fig. S1 Synthesis of NDI-based dendrimers.

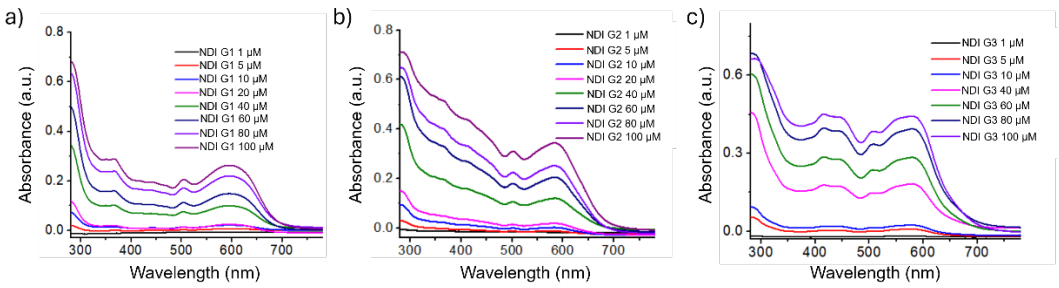


Fig. S2 Absorbance of a) **NDI G1** b) **NDI G2** c) **NDI G3** in Tris buffer (10 mM, pH 7.4).

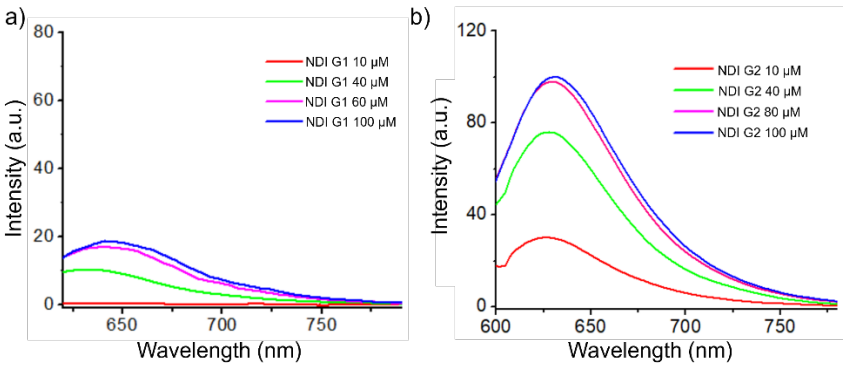


Fig. S3 Fluorescence emission of a) **NDI G1** b) **NDI G2** in Tris buffer (10 mM, pH 7.4).

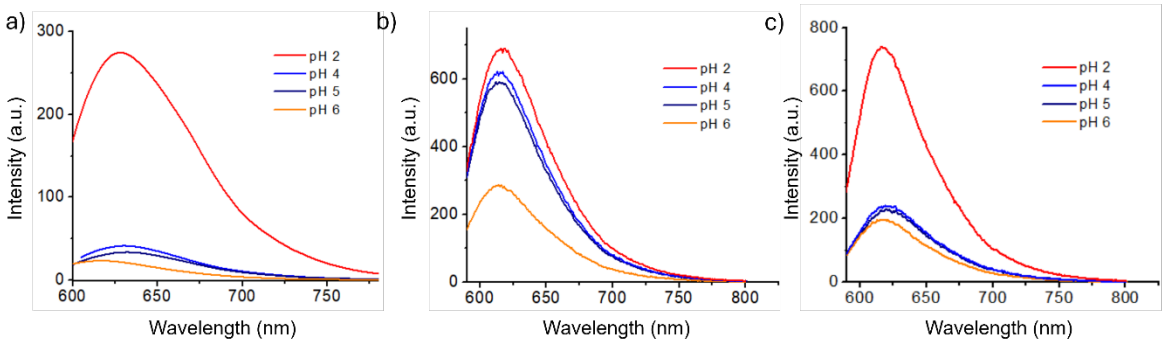


Fig. S4 Effect of pH on the absorbance and fluorescence properties of the a) **NDI G1** (40 μM), b) **NDI G2** (40 μM) and c) **NDI G3** (40 μM).

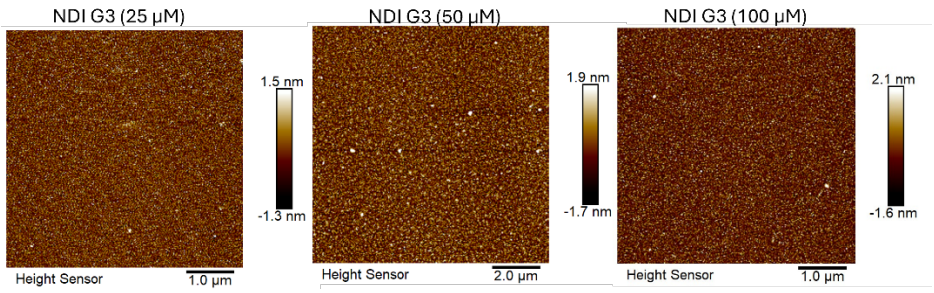


Fig. S5 AFM images of varying concentrations of **NDI G3** to study its aggregation.

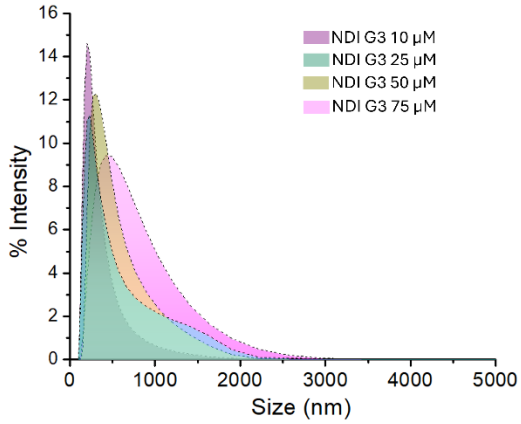


Fig. S6 DLS study with varying concentrations of **NDI G3** to study its aggregation.

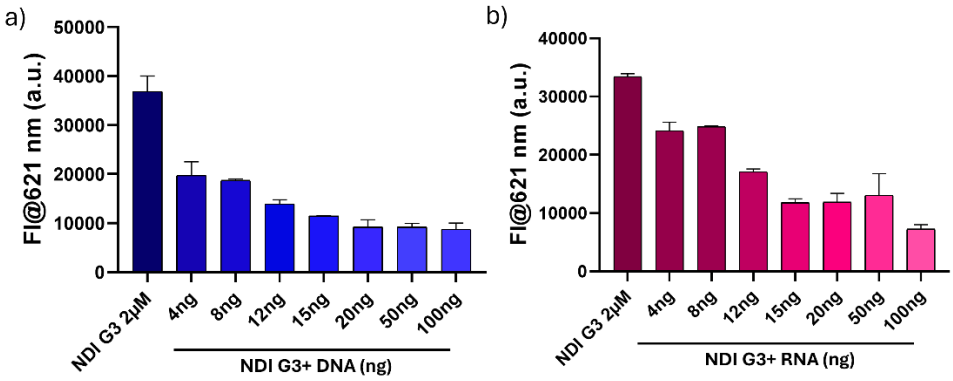


Fig. S7 Fluorescence response of **NDI G3** with DNA and RNA complexation.

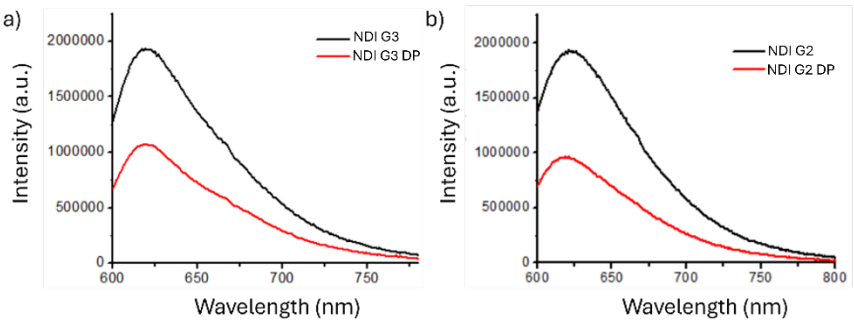


Fig. S8 Change in NDI fluorescence upon formation of DP (pDNA) with a) **NDI G3** (10 µM) and b) **NDI G2** (50 µM).

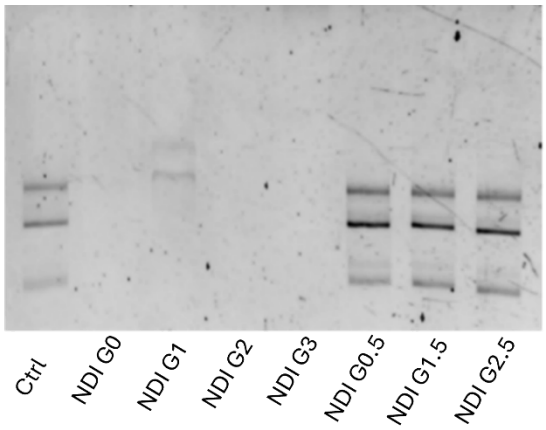


Fig. S9 Gel electrophoresis of **NDI G0-3** (20 µM) with pDNA (200 ng).

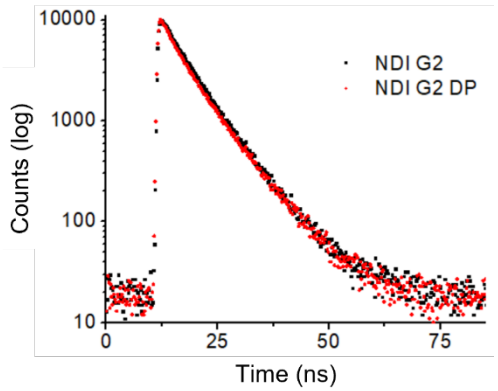


Fig. S10 Lifetime measurement of **NDI G2** and **NDI G2** with pDNA.

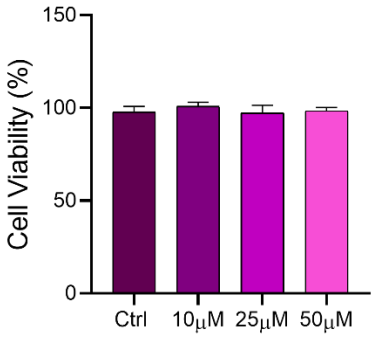


Fig. S11 a) Cellular toxicity measured using MTT assay for **NDI G3** in HEK-293T.

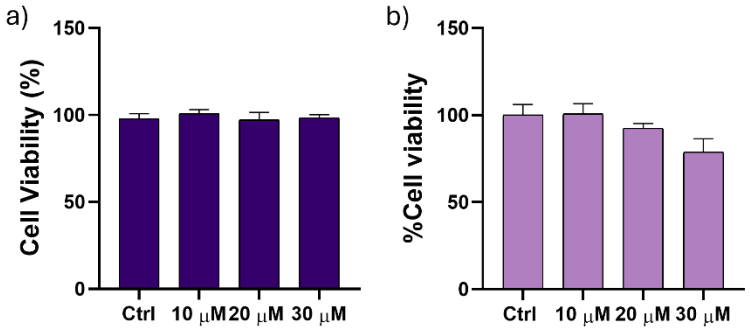


Fig. S12 MTT analysis to assess cytotoxicity with varying concentrations **NDI G3** in a) N9 cells and b) SHSY5Y cells.

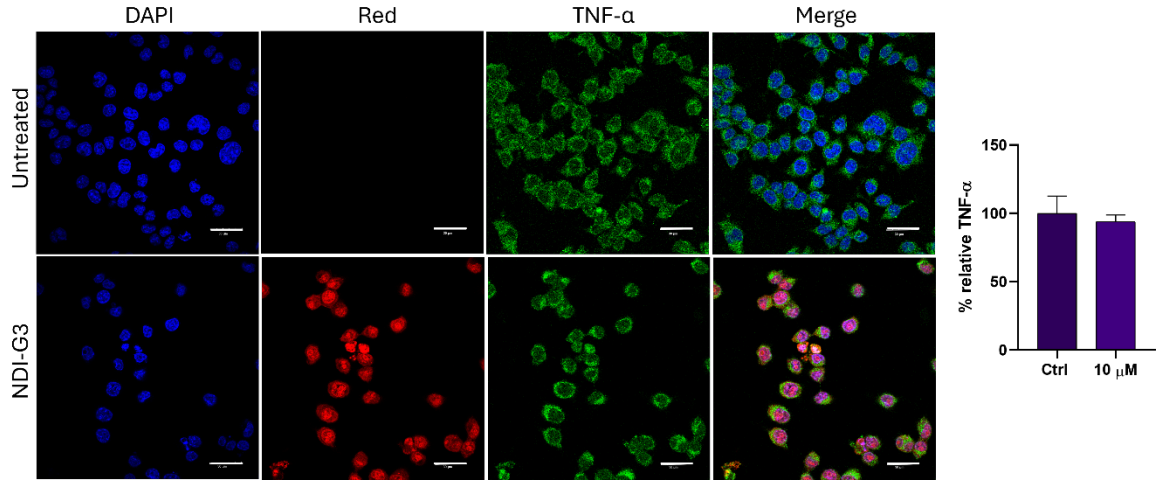


Fig. S13 IF assay to assess TNF-α levels post treatment with **NDI G3** (10 μM) in N9 cells (scale bar 30 μM).

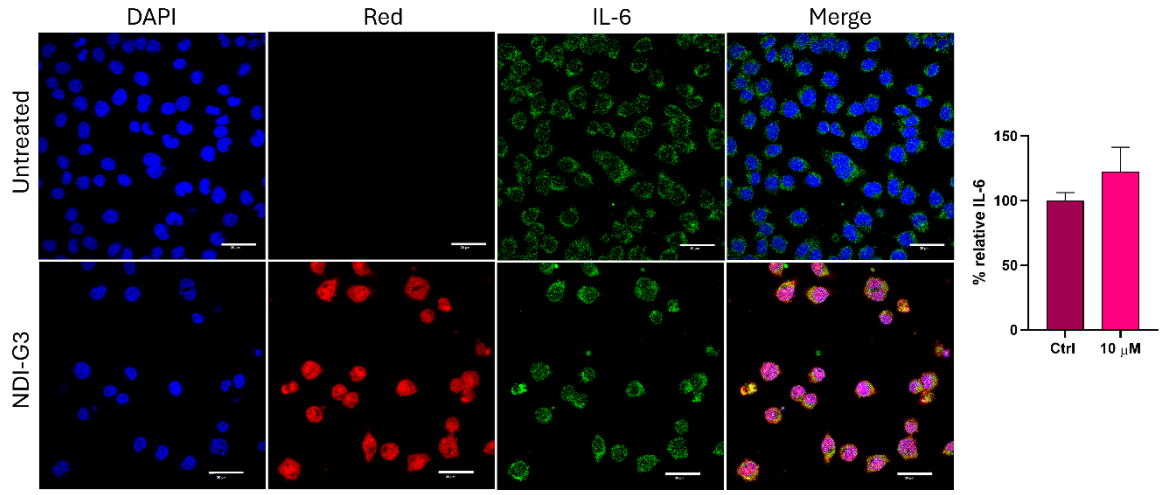


Fig. S14 IF assay to assess IL-6 levels post treatment with **NDI G3** (10 µM) in N9 cells (scale bar 30 µM).

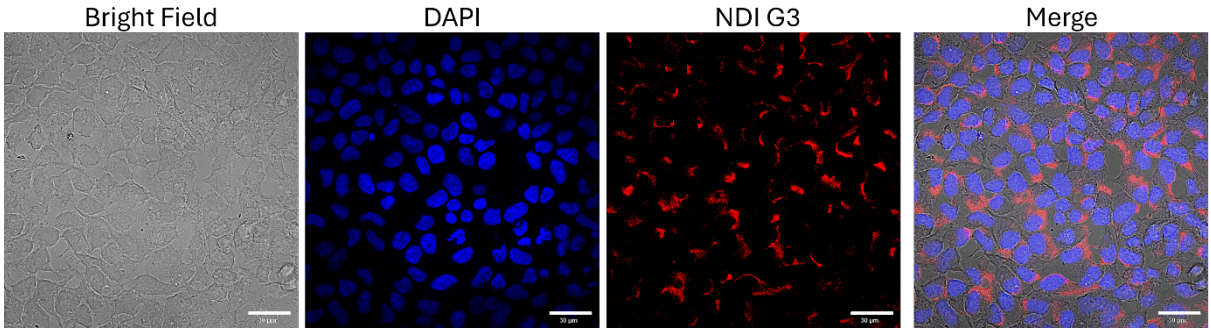


Fig. S15 Cellular uptake of **NDI G3** in HEK293T cells (scale bar 30 µm).

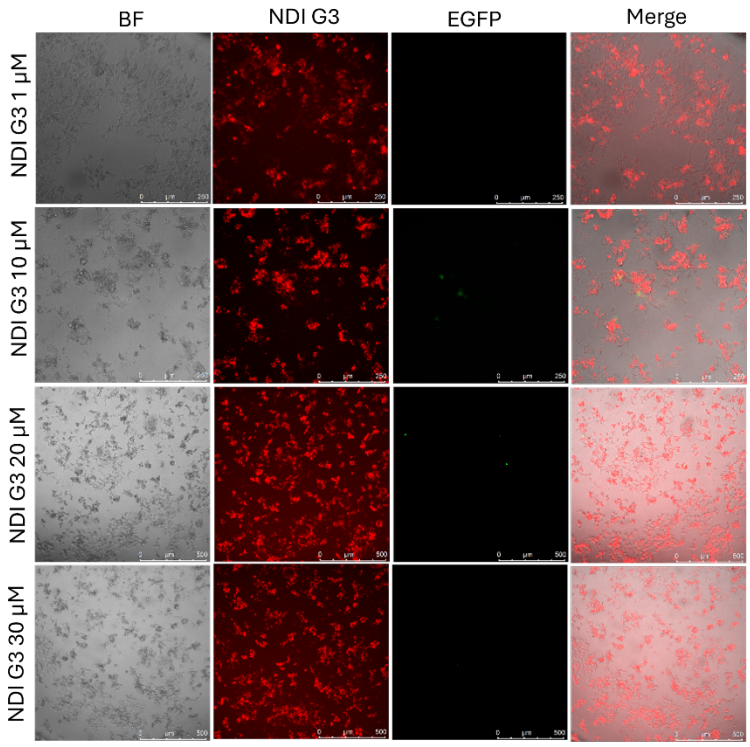


Fig. S16 Transfection experiment of **NDI G3** varying concentration with EGFP plasmid.

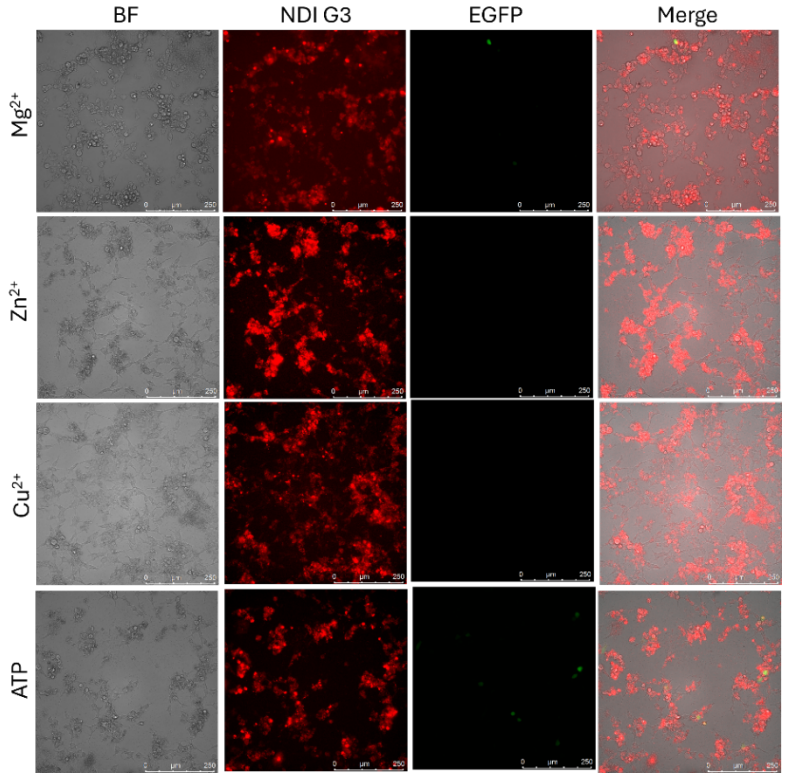


Fig. S17 Transfection experiment of **NDI G3** in presence of various additives to facilitate transfection.

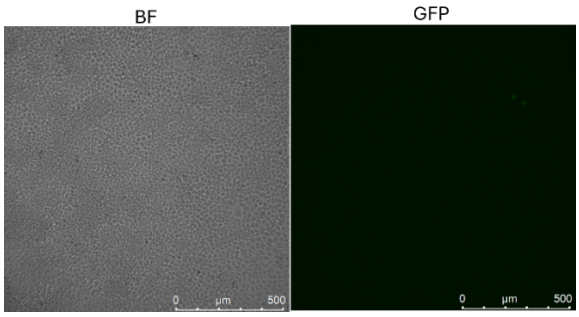


Fig. S18 EGFP plasmid transfection in presence of plasmid (150 ng) and Ca^{2+} (2 mM).

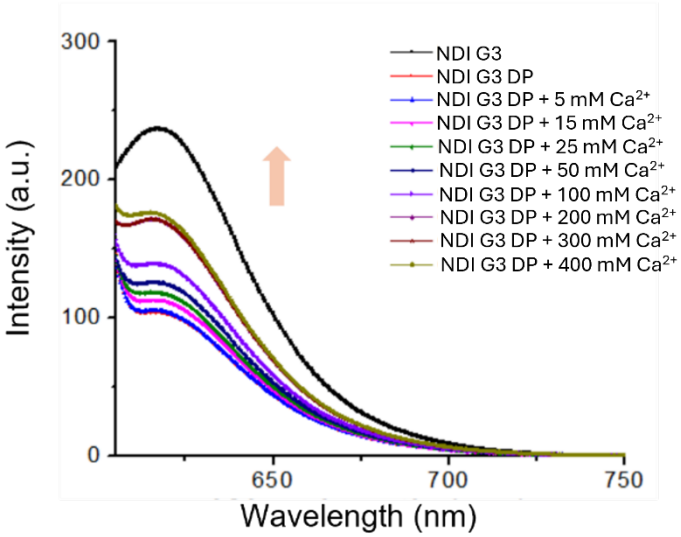


Fig. S19 Change in NDI fluorescence from **NDI G3** DP (40 µM) post addition with Ca^{2+}.

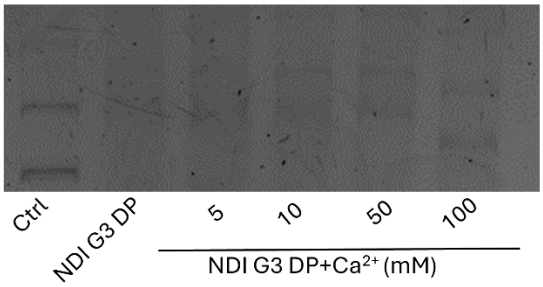


Fig. S20 Gel electrophoresis analysis to study the effect of Ca^{2+} on DP.

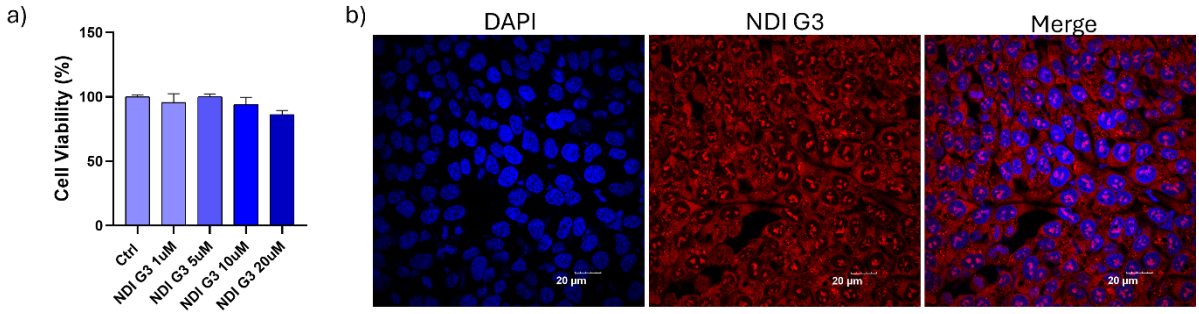


Fig. S21 a) MTT assay to assess the cytotoxicity of **NDI G3** for Caco2 cells post 48 h incubation b) cellular uptake of **NDI G3** in Caco2 cells post 6 h incubation.

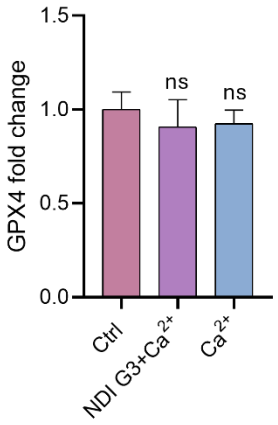


Fig. S22 RT-PCR analysis to study effect of **NDI G3** (2 µM) with Ca^{2+} (2 mM) and Ca^{2+} (2 mM) with GPX4 siRNA (200 nM) to monitor GPX4 mRNA levels.

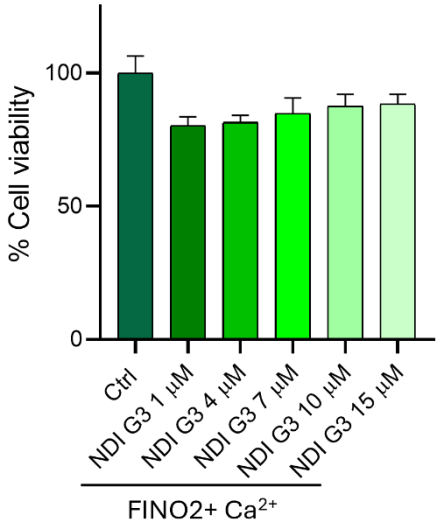
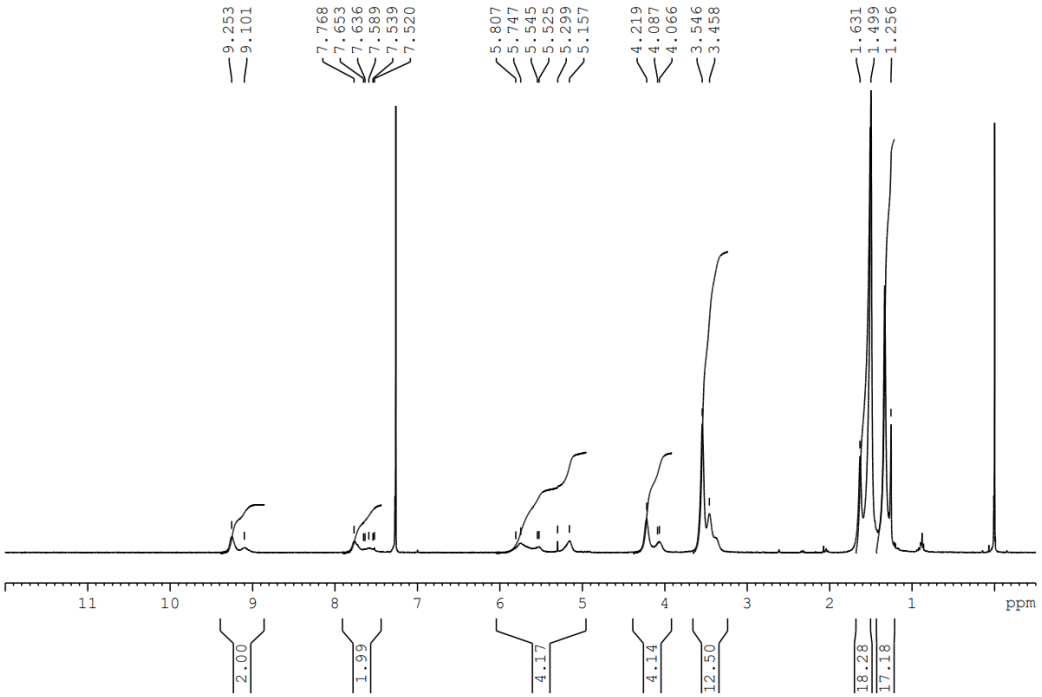


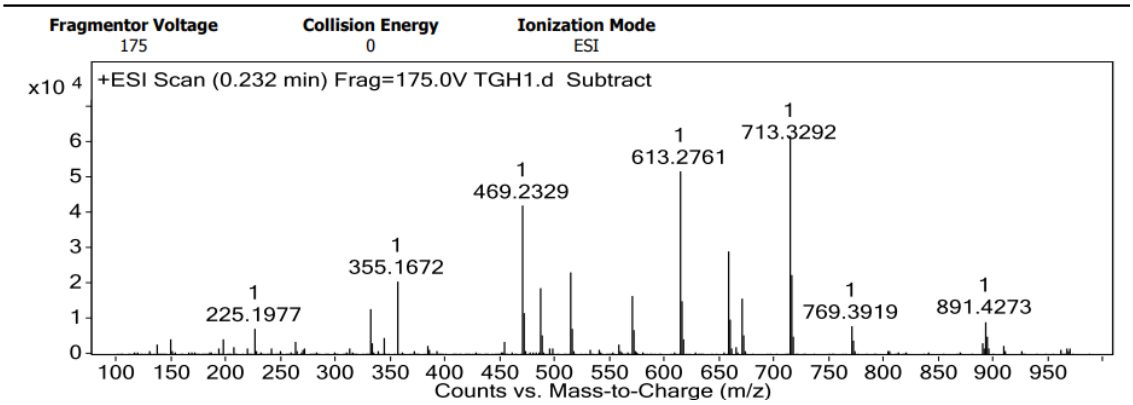
Fig. S23 MTT analysis to assess the cytotoxicity of **NDI G3**-FINO2 (10 µM) and Ca^{2+} (2mM) formulation in the absence of GPX4 siRNA.

3. Characterization data

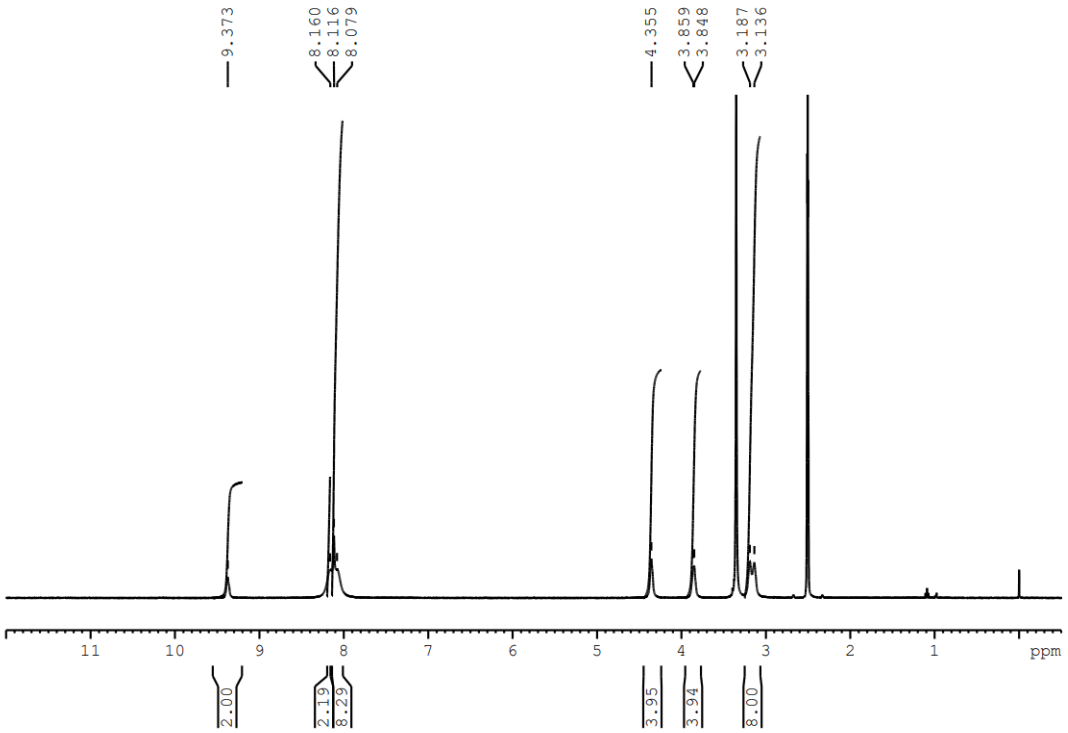
^{1}H NMR spectrum of **NDI G0** Boc **3**



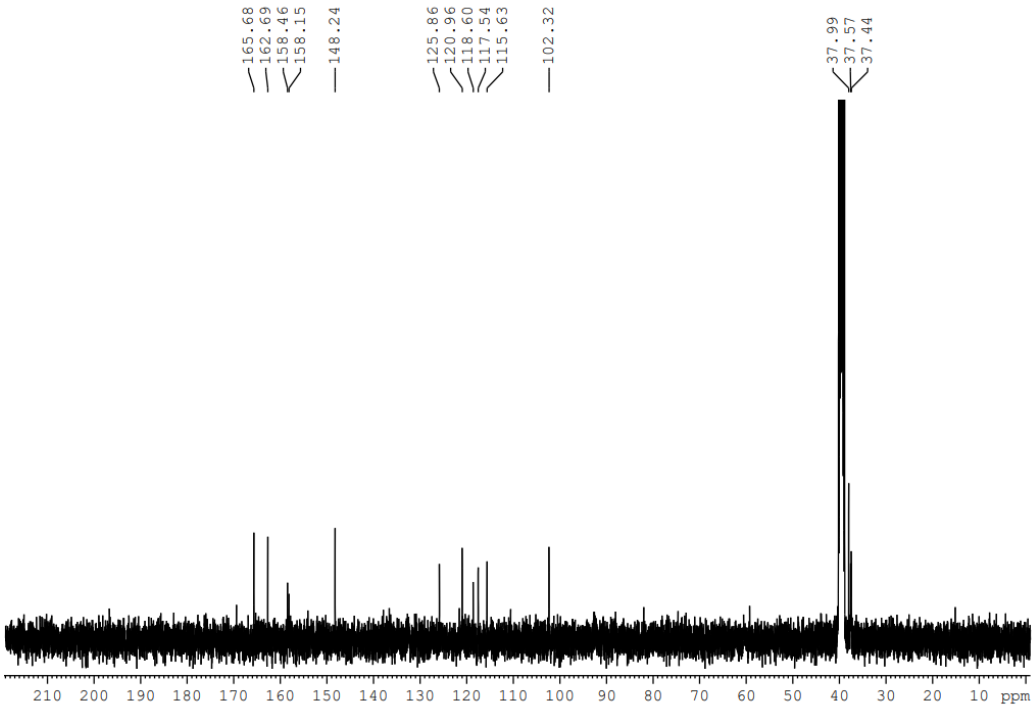
HRMS of **NDI G0** Boc (**3**)



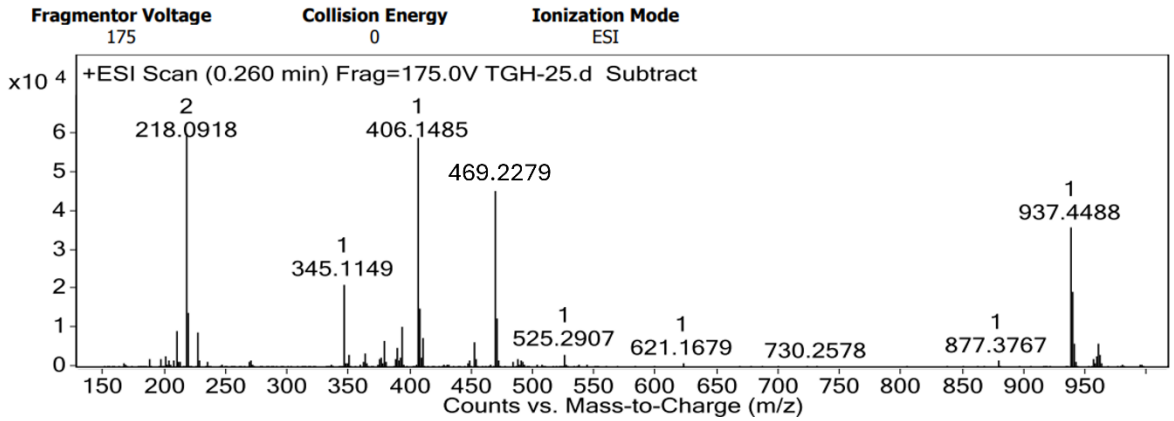
^{1}H NMR spectrum of **NDI G0** (**4**)



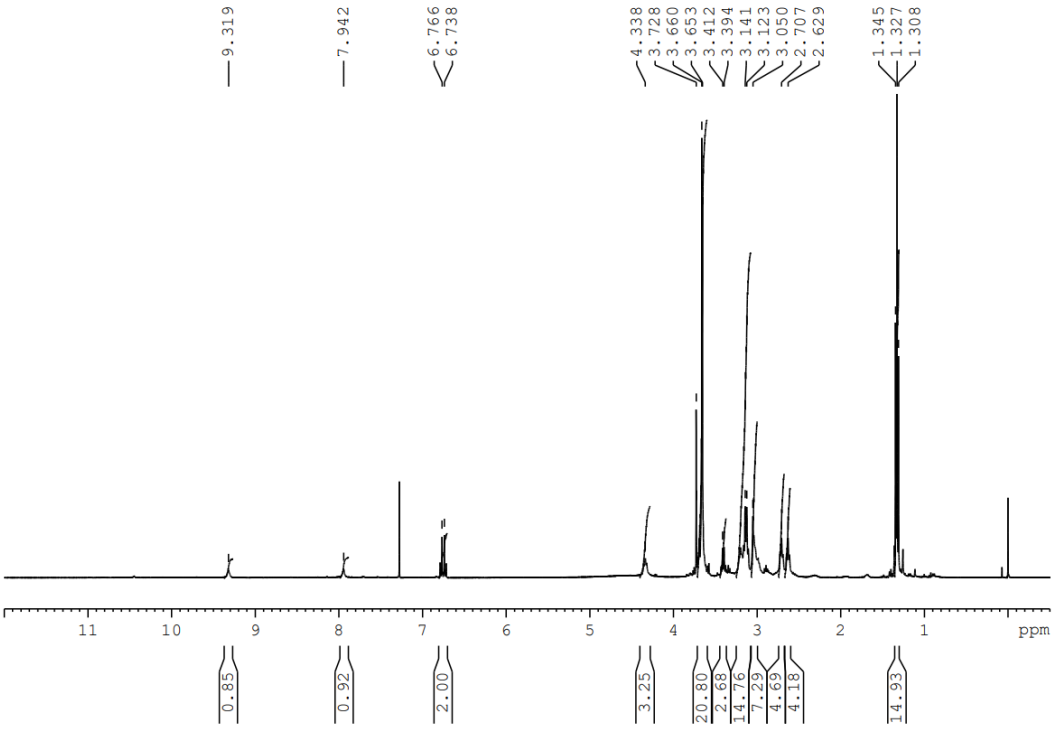
^{13}C NMR spectrum of **NDI G0** (**4**)



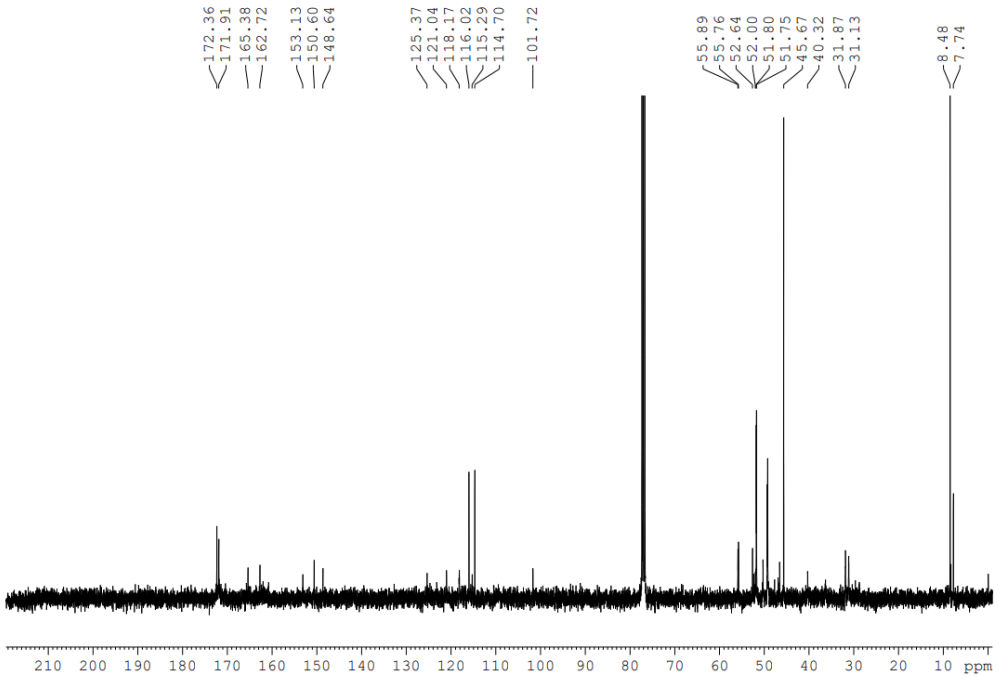
HRMS of **NDI G0** (**4**)



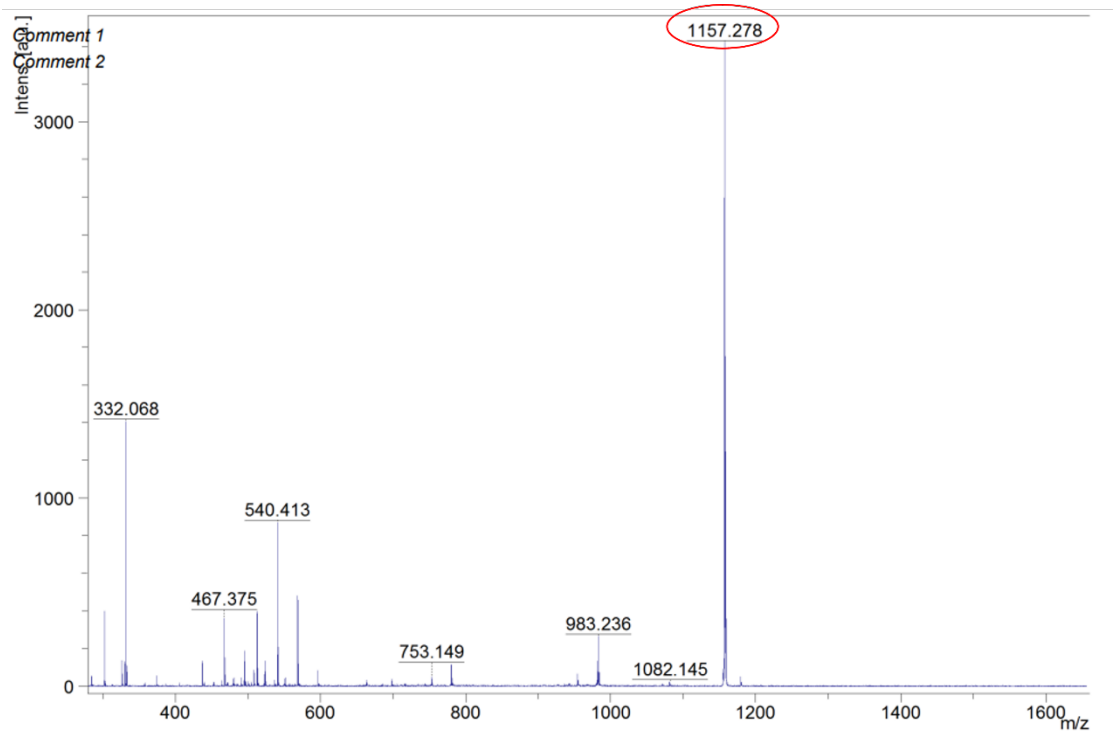
^{1}H NMR spectrum of **NDI G0.5 (5)**



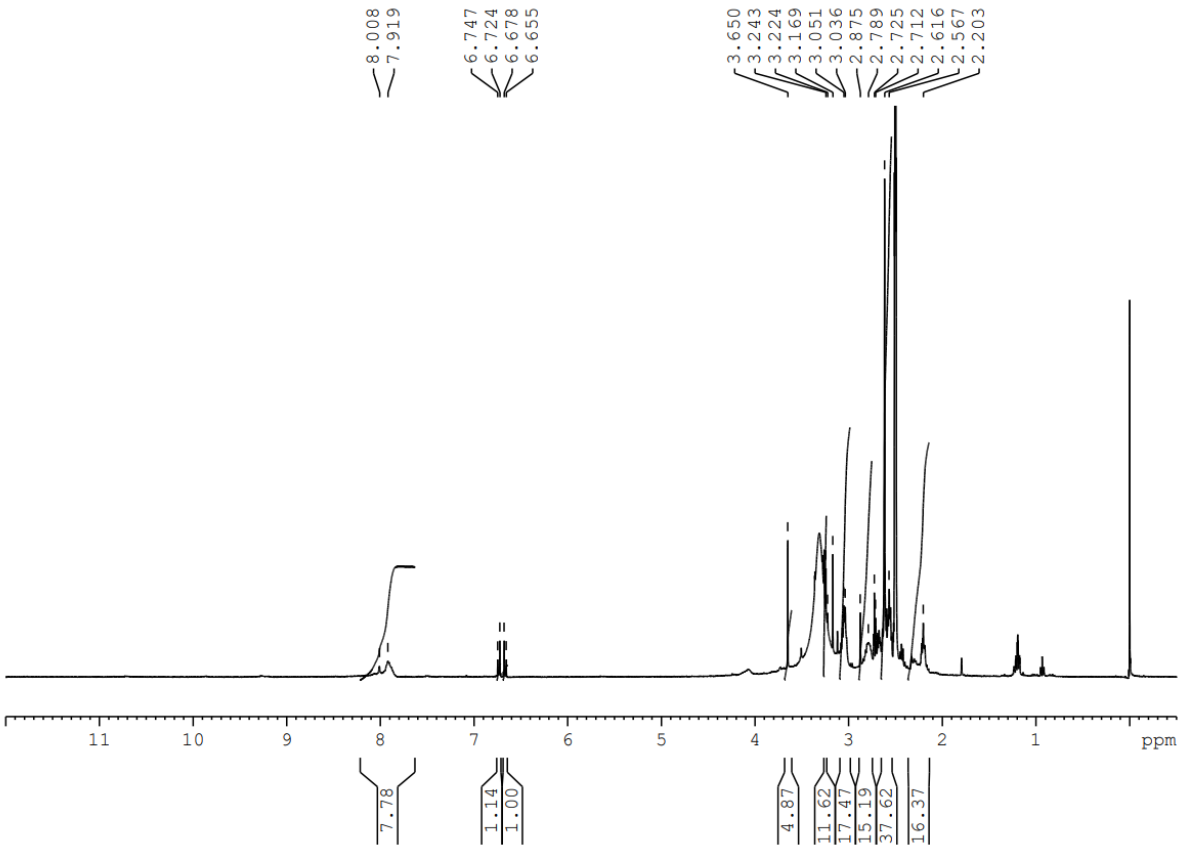
^{13}C NMR spectrum of **NDI G0.5 (5)**



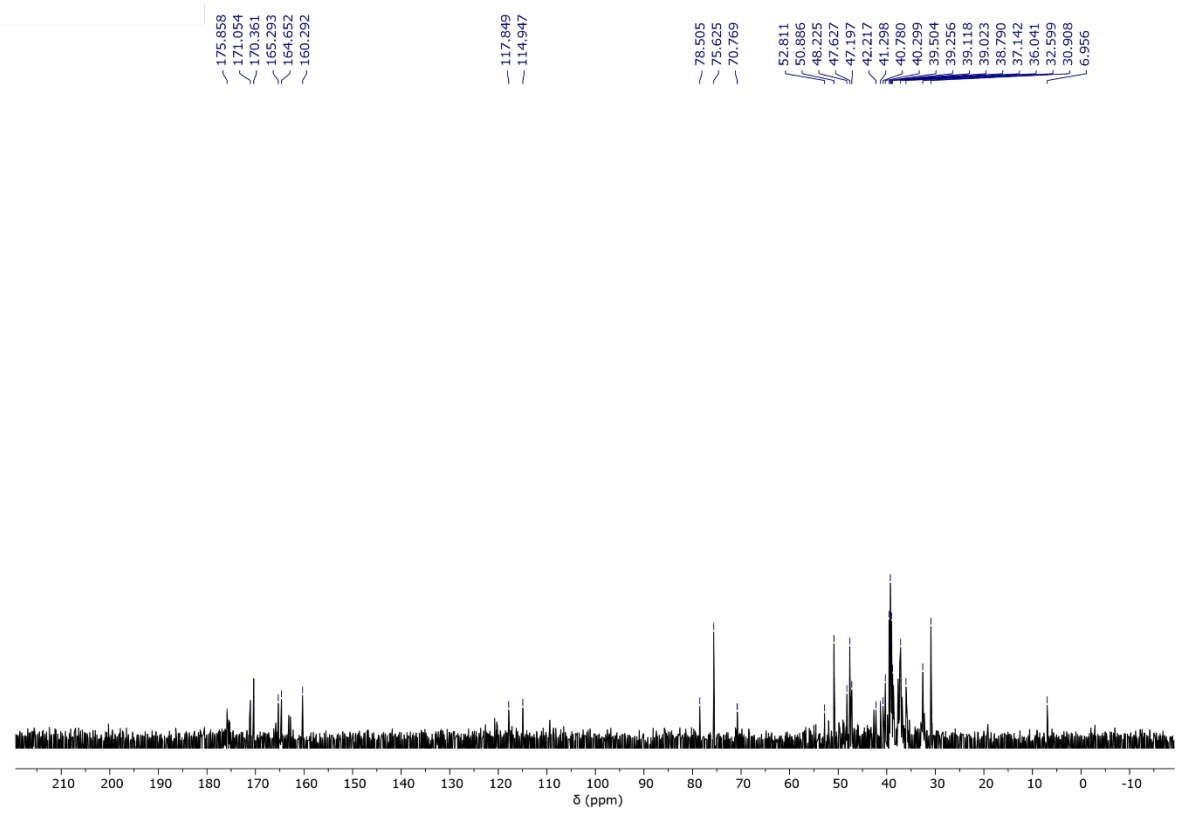
MALDI (TOF)-MS of **NDI G0.5** (**5**)



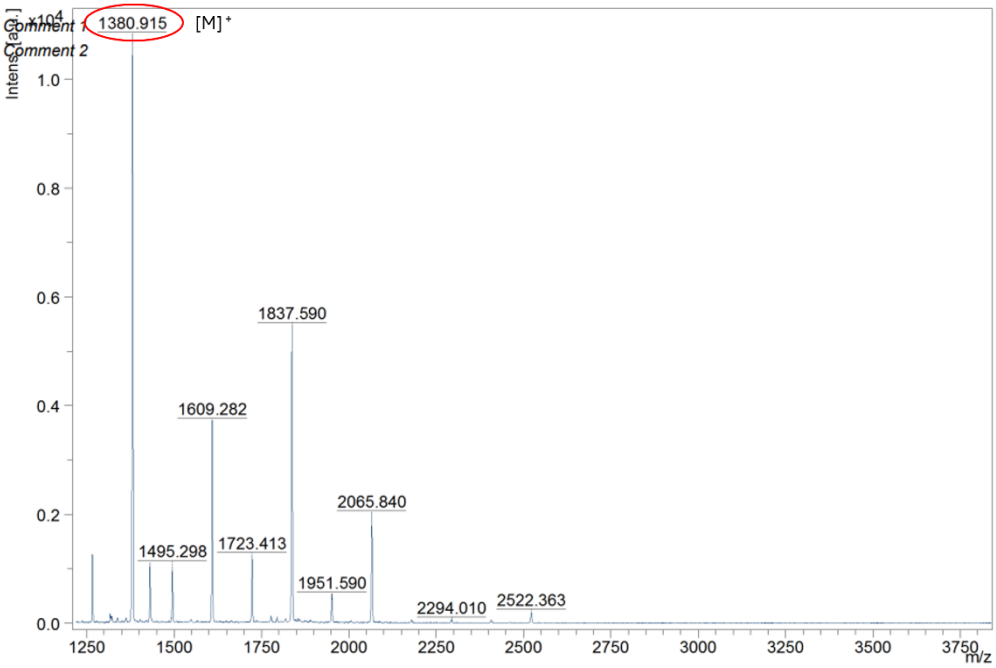
^{1}H NMR spectrum of **NDI G1** (**6**)



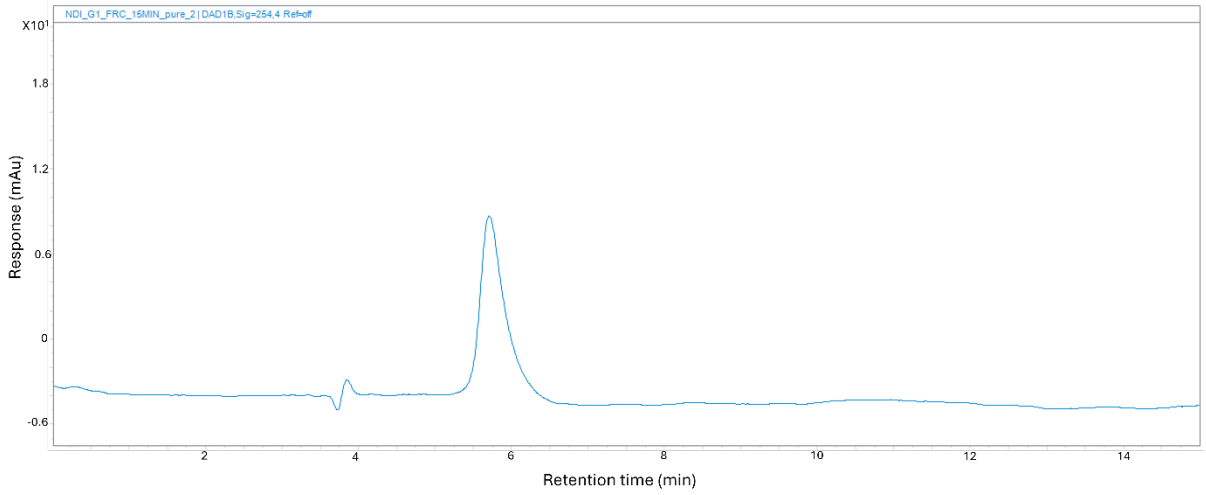
^{13}C NMR spectrum of **NDI G1 (6)**



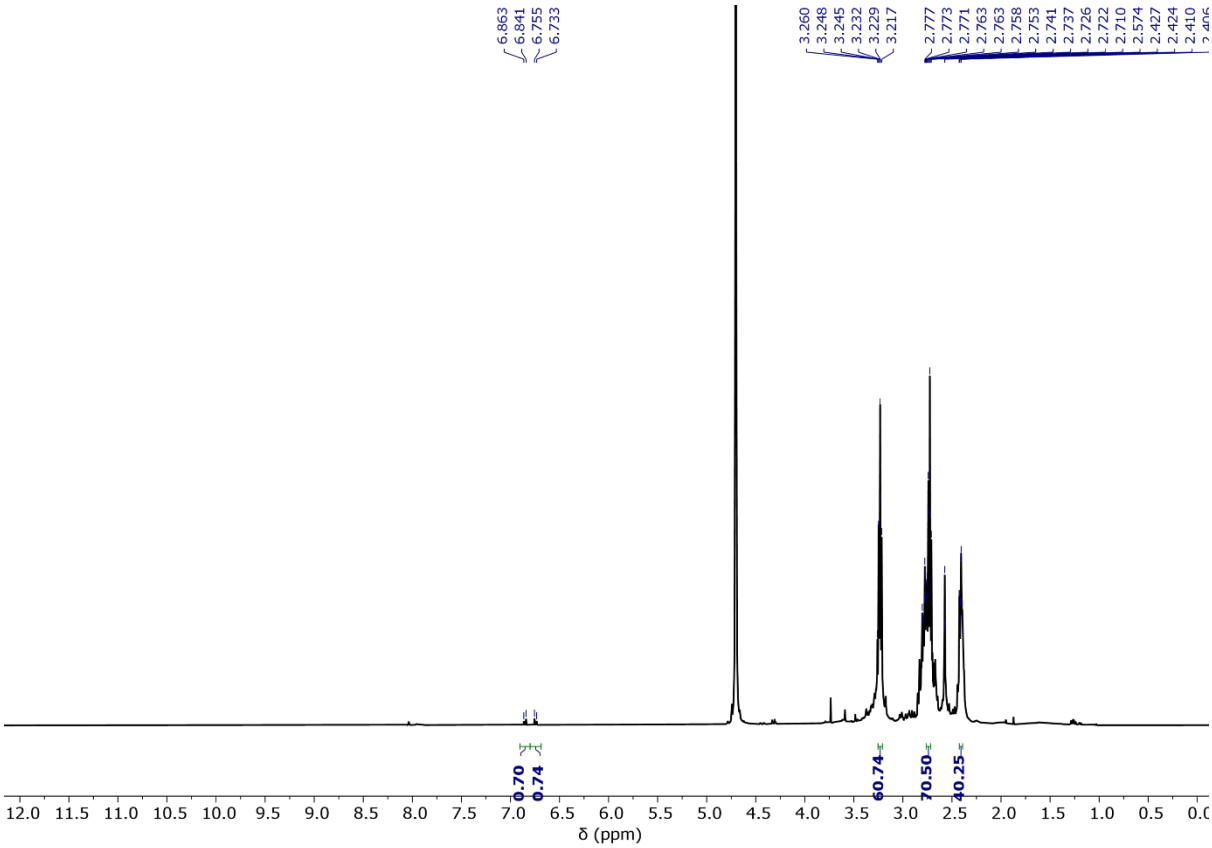
MALDI (TOF)-MS of **NDI G1 (6)**



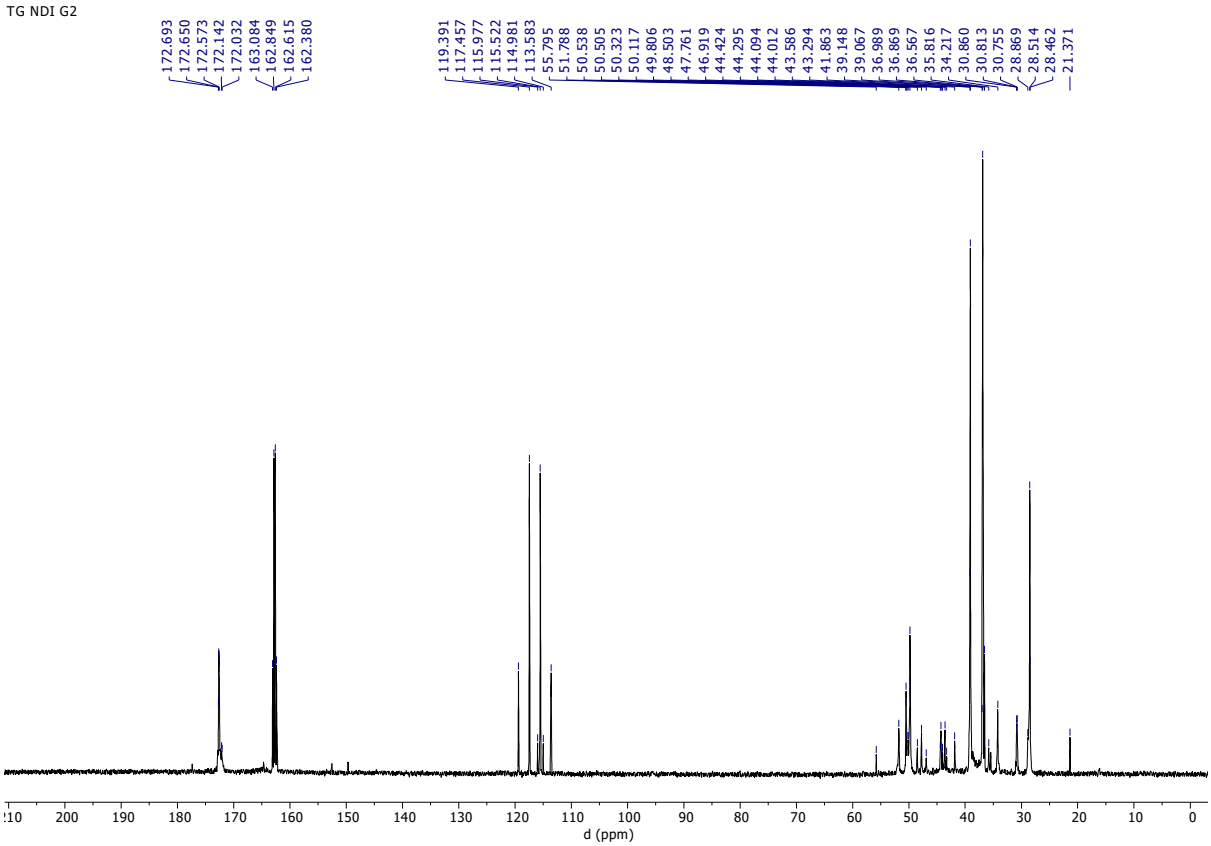
HPLC chromatogram for **NDI G1** (**6**)



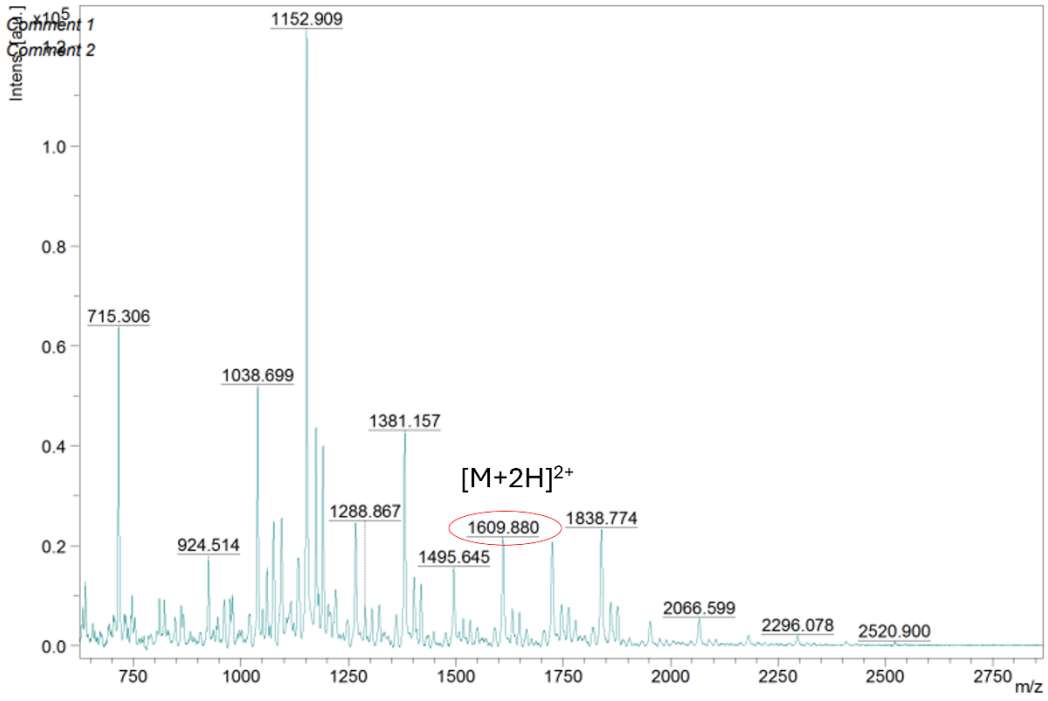
^{1}H NMR spectrum **NDI G2** (**8**)



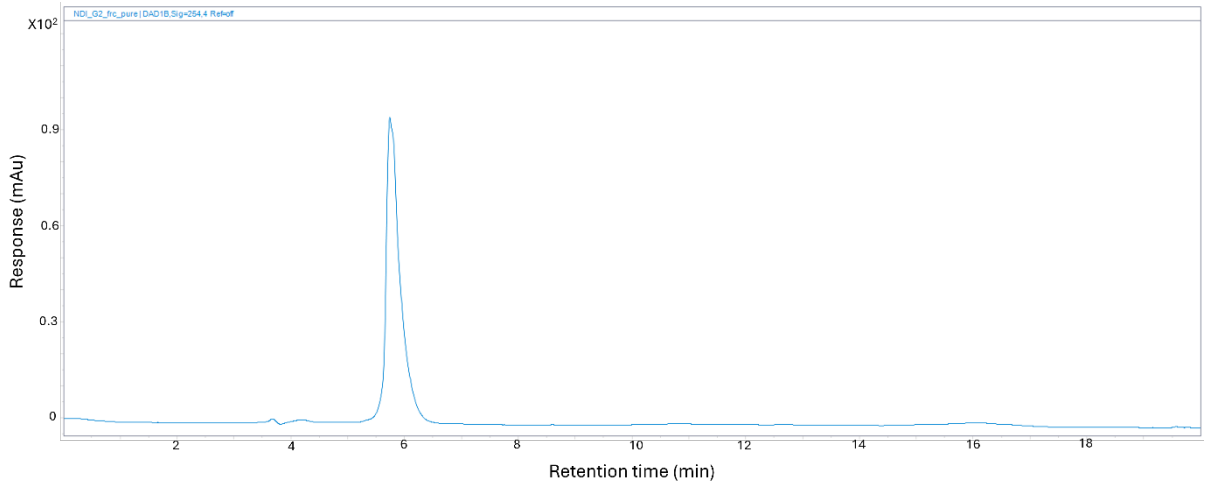
^{13}C NMR spectrum **NDI G2** (**8**)



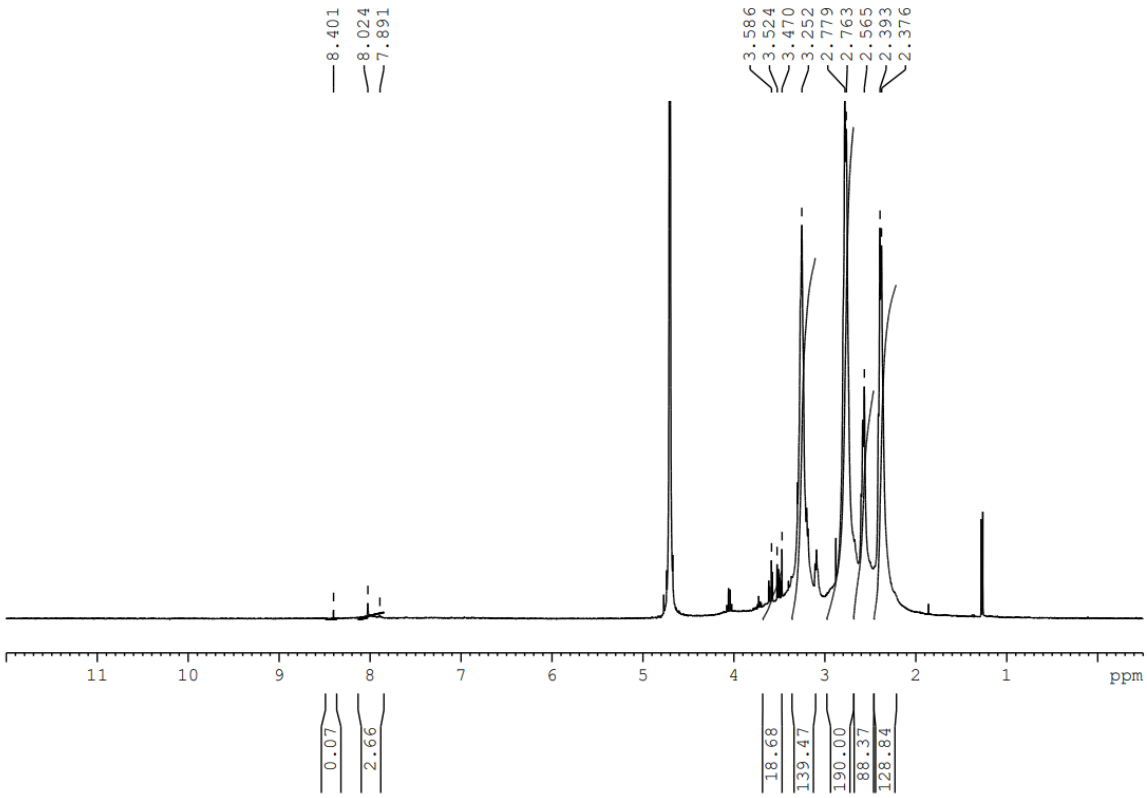
MALDI (TOF)-MS of **NDI G2** (**8**)



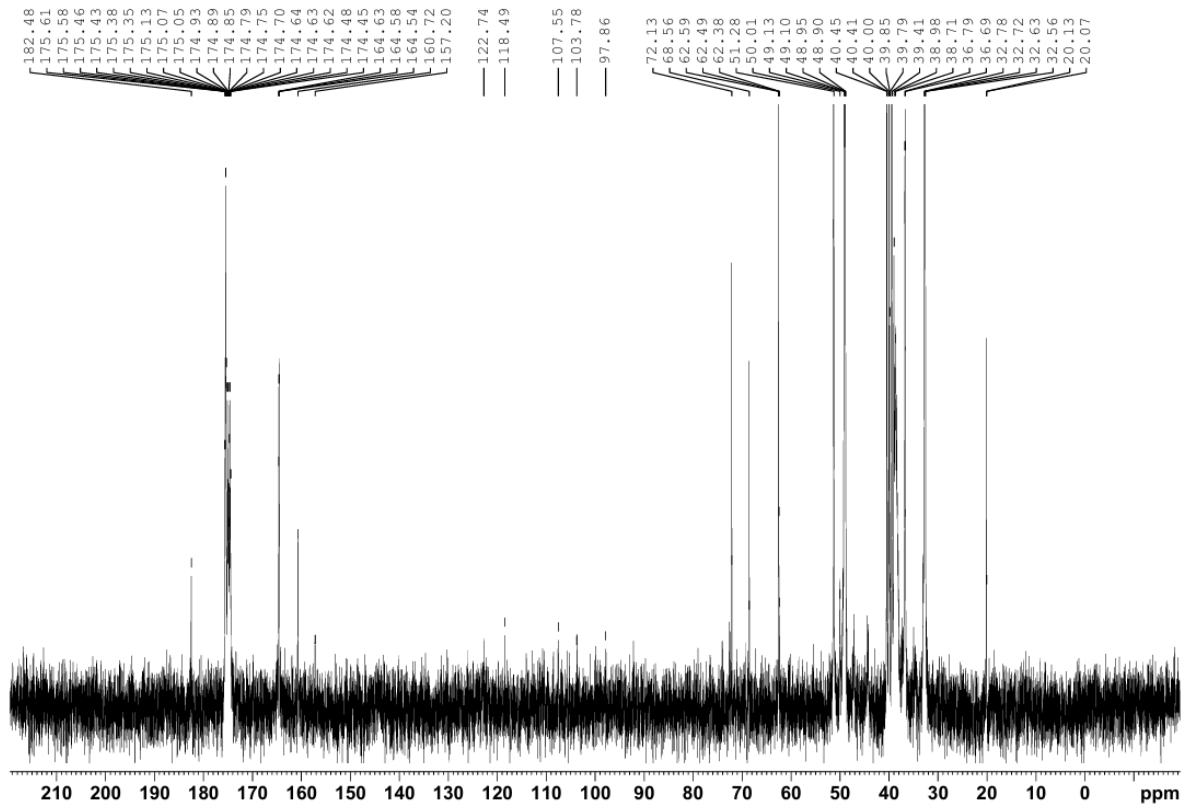
HPLC chromatogram for **NDI G2** (8)



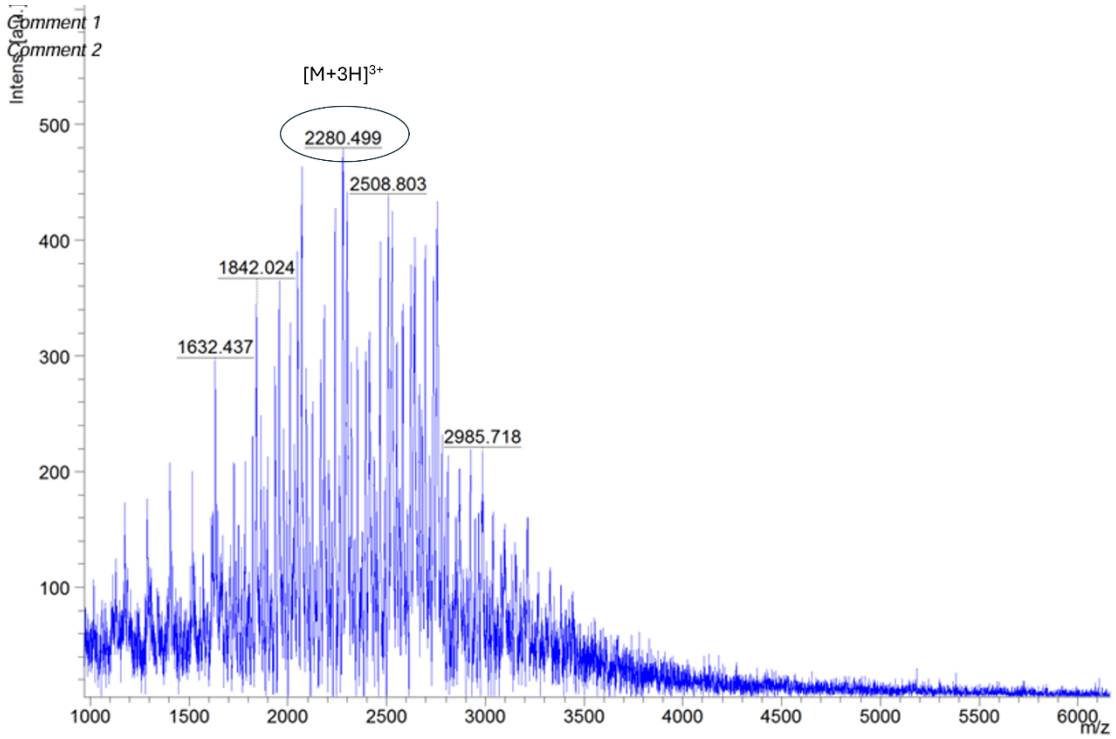
^{1}H NMR spectrum of **NDI G3** (**10**)



^{13}C NMR spectrum of **NDI G3** (**10**)



MALDI (TOF)-MS of **NDI G3** (**10**)



HPLC chromatogram for **NDI G3** (10)