

## SUPPORTING INFORMATION

### Novel dendritic derivatives of unsaturated fatty acids as promising transdermal permeation enhancers for Tenofovir

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**Table S1.**  $^{13}\text{C}$  NMR spectra of dendritic ester derivatives before and after storage.

| Dendritic ester derivative | $^{13}\text{C}$ NMR |                       |
|----------------------------|---------------------|-----------------------|
|                            | Fresh               | 2 year storage        |
| PA1E 2                     | 14.09               | 14.09                 |
|                            | 22.64               | 22.65                 |
|                            | 24.98               | 24.98                 |
|                            | 26.68               | 26.61                 |
|                            | 27.16               | 27.17                 |
|                            | 27.21               | 27.22                 |
|                            | 28.09               | 28.09                 |
|                            | 28.98               | 28.98                 |
|                            | 29.11               | 29.11                 |
|                            | 29.16               | 29.15                 |
|                            | 29.18               | 29.18                 |
|                            | 29.69               | 29.69                 |
|                            | 31.77               | 31.77                 |
|                            | 33.80               | 33.71                 |
|                            | 34.35               | 34.34                 |
|                            | 49.40               | 49.36                 |
|                            | 50.14               | 50.15                 |
|                            | 62.44               | 62.41                 |
|                            | 80.31               | 80.37                 |
| LA1E 3                     | 129.76              | 129.76                |
|                            | 129.98              | 129.98                |
|                            | 171.98              | 171.91                |
|                            | 173.86              | 173.86                |
|                            | 14.04               | 14.06                 |
|                            | 22.54               | 22.56                 |
|                            | 24.96               | 24.97                 |
|                            | 25.60               | 25.62                 |
|                            | 26.65               | 26.67                 |
|                            | 27.17               | 27.19                 |
|                            | 28.07               | 28.09                 |
|                            | 29.10               | 29.12                 |
|                            | 29.13               | 29.14                 |
|                            | 29.16               | 29.18                 |
|                            | 29.32               | 29.33                 |
|                            | 29.58               | 29.60                 |
|                            | 31.50               | 31.51                 |
|                            | 33.77               | 33.79                 |
|                            | 34.32               | 34.33                 |
|                            | 49.39               | 49.40                 |
|                            | 50.13               | 50.14                 |
|                            | 62.41               | 62.42                 |
|                            | 80.28               | 80.30                 |
|                            |                     | <i>Continued.....</i> |
|                            | 127.89              | 127.90                |

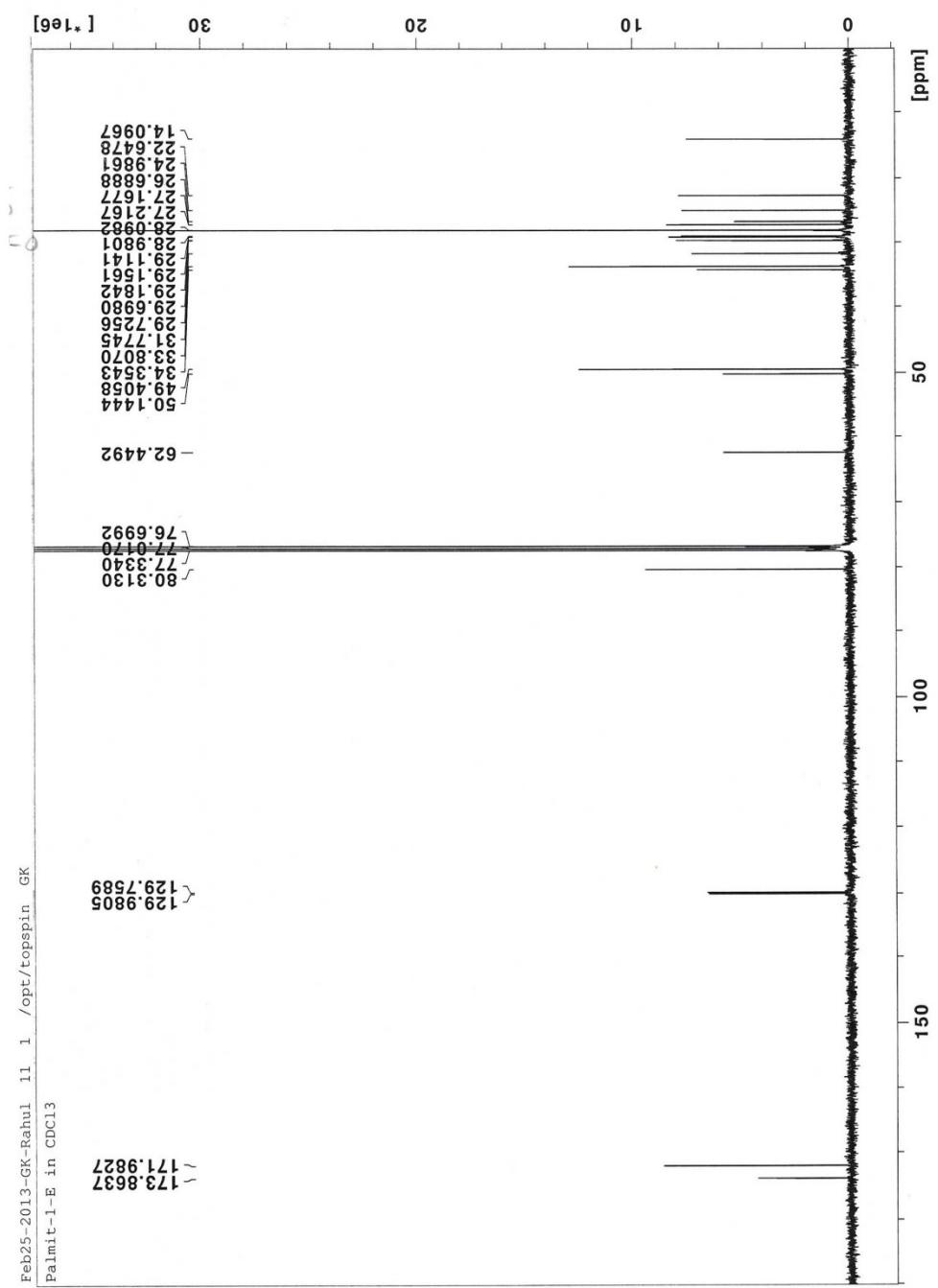
|                |        |        |
|----------------|--------|--------|
|                | 128.01 | 128.02 |
|                | 130.01 | 130.04 |
|                | 130.17 | 130.19 |
|                | 171.91 | 171.94 |
|                | 173.79 | 173.81 |
| <b>LLA1E 4</b> |        |        |
|                | 14.26  | 14.26  |
|                | 20.54  | 20.54  |
|                | 24.97  | 24.97  |
|                | 25.52  | 25.52  |
|                | 25.60  | 25.61  |
|                | 26.68  | 26.63  |
|                | 27.20  | 27.20  |
|                | 28.09  | 28.09  |
|                | 29.12  | 29.12  |
|                | 29.14  | 29.14  |
|                | 29.58  | 29.18  |
|                | 33.80  | 33.74  |
|                | 34.34  | 34.33  |
|                | 49.40  | 49.38  |
|                | 50.14  | 50.15  |
|                | 62.45  | 62.41  |
|                | 80.30  | 80.33  |
|                | 127.11 | 127.11 |
|                | 127.71 | 127.71 |
|                | 128.25 | 128.24 |
|                | 128.28 | 128.27 |
|                | 130.26 | 130.26 |
|                | 131.95 | 131.94 |
|                | 171.97 | 171.91 |
|                | 173.84 | 173.81 |
| <b>AA1E 5</b>  |        |        |
|                | 14.10  | 14.06  |
|                | 22.56  | 22.56  |
|                | 24.83  | 24.82  |
|                | 25.61  | 25.61  |
|                | 26.59  | 26.52  |
|                | 26.91  | 26.58  |
|                | 27.21  | 27.20  |
|                | 28.09  | 28.08  |
|                | 29.69  | 29.31  |
|                | 31.51  | 31.50  |
|                | 33.72  | 33.63  |
|                | 34.66  | 33.71  |
|                | 49.39  | 49.31  |
|                | 50.14  | 50.12  |
|                | 62.53  | 62.50  |
|                | 80.30  | 80.37  |
|                | 127.54 | 127.53 |
|                | 127.86 | 127.86 |
|                | 128.17 | 128.16 |

*Continued.....*

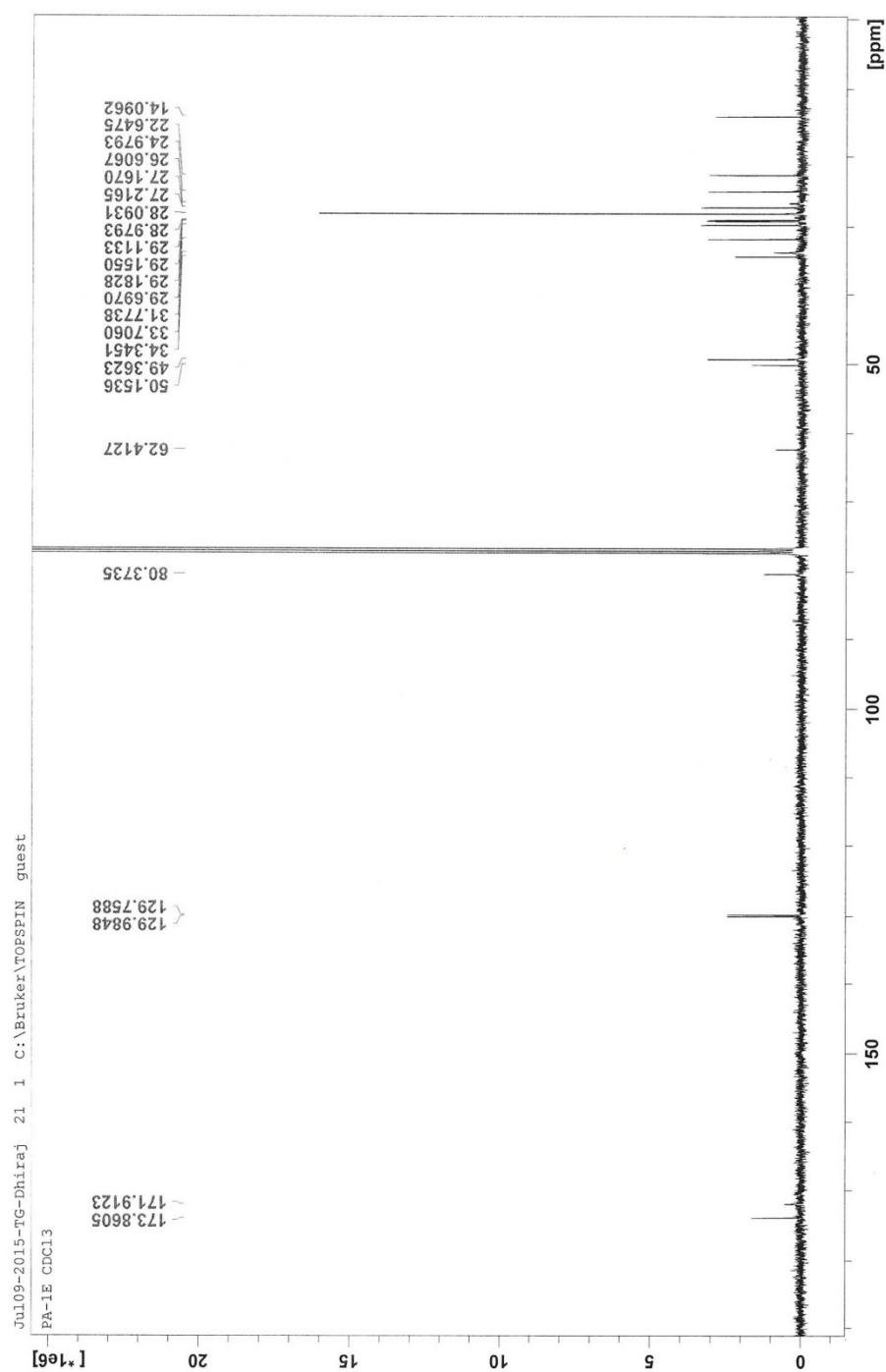
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|        |        |
|--------|--------|
| 128.20 | 128.20 |
| 128.79 | 128.56 |
| 128.99 | 128.80 |
| 130.47 | 130.47 |
| 171.96 | 171.88 |
| 173.57 | 173.58 |

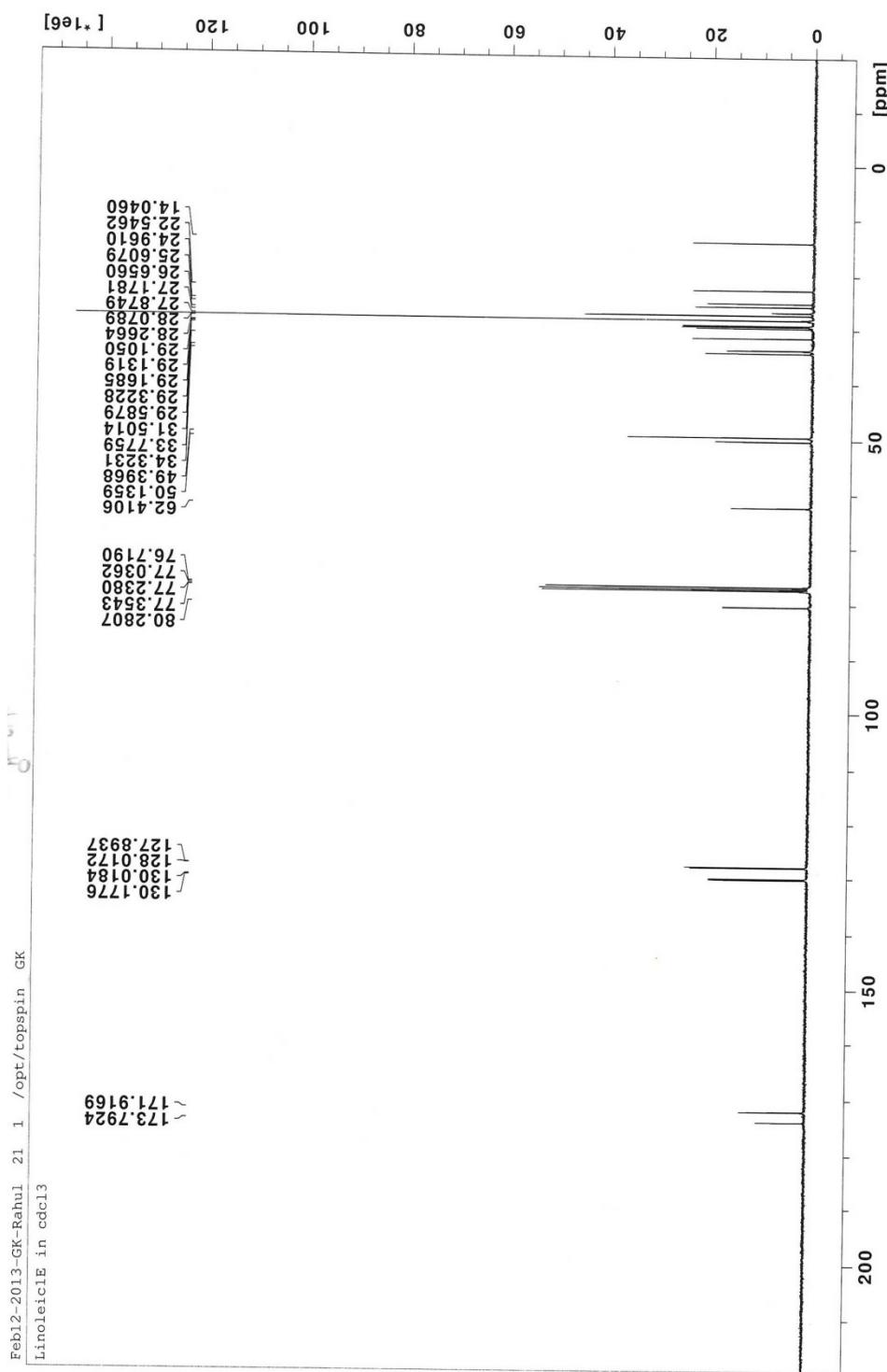
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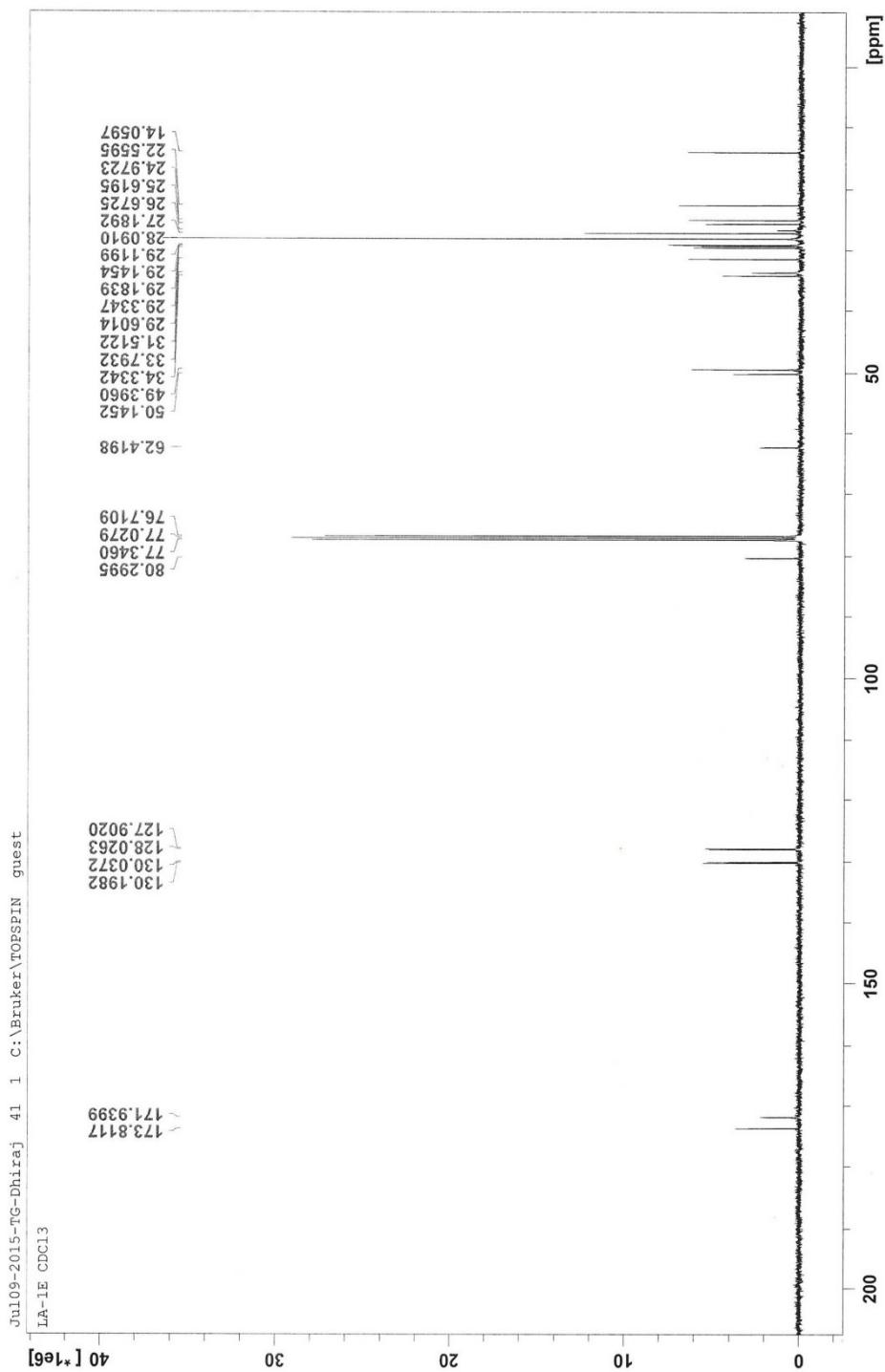
**Fig. S1.** <sup>13</sup>C NMR of PA1E **2** (day 0).



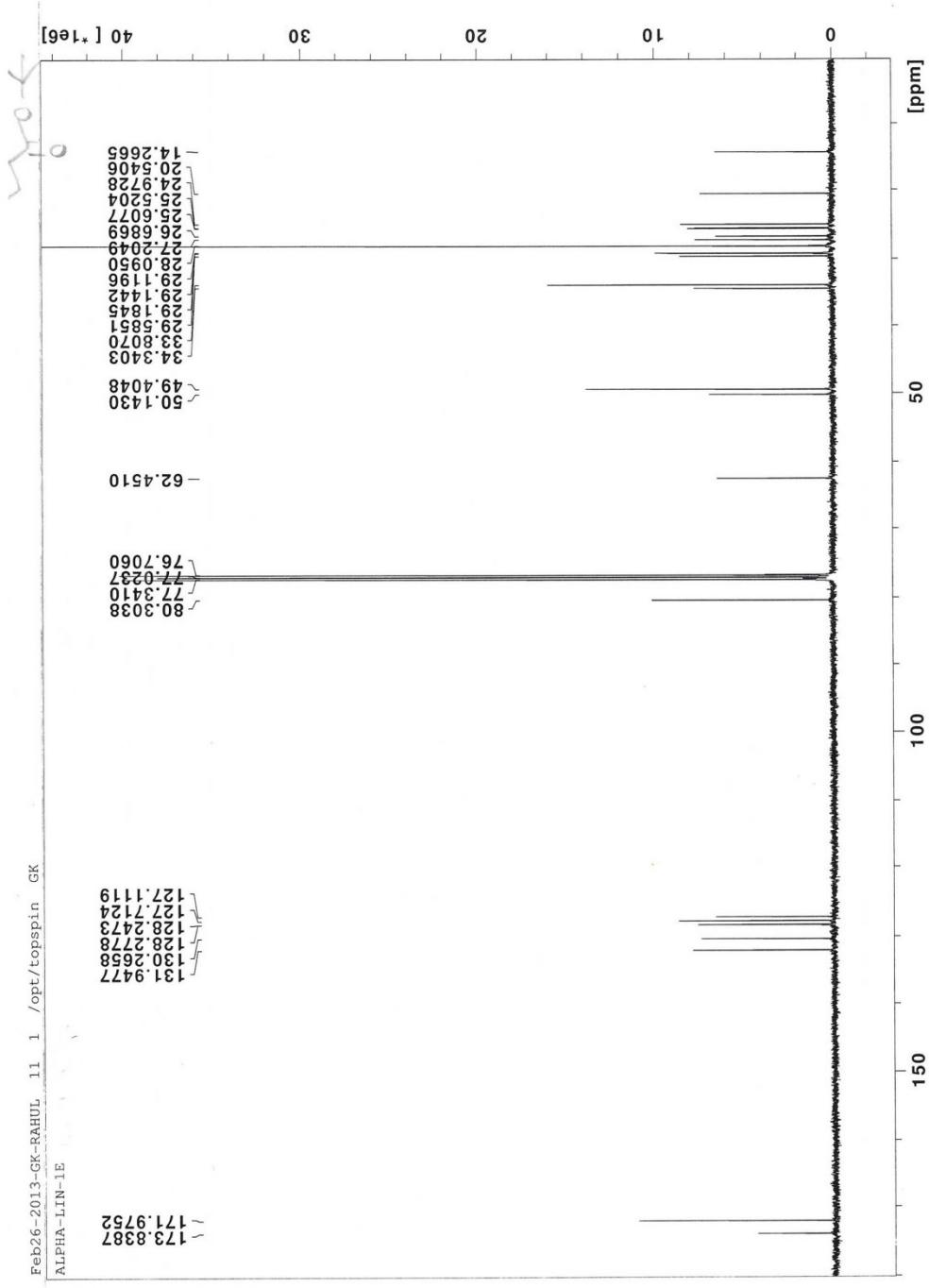
**Fig. S2.**  $^{13}\text{C}$  NMR of PA1E **2** (2 years).



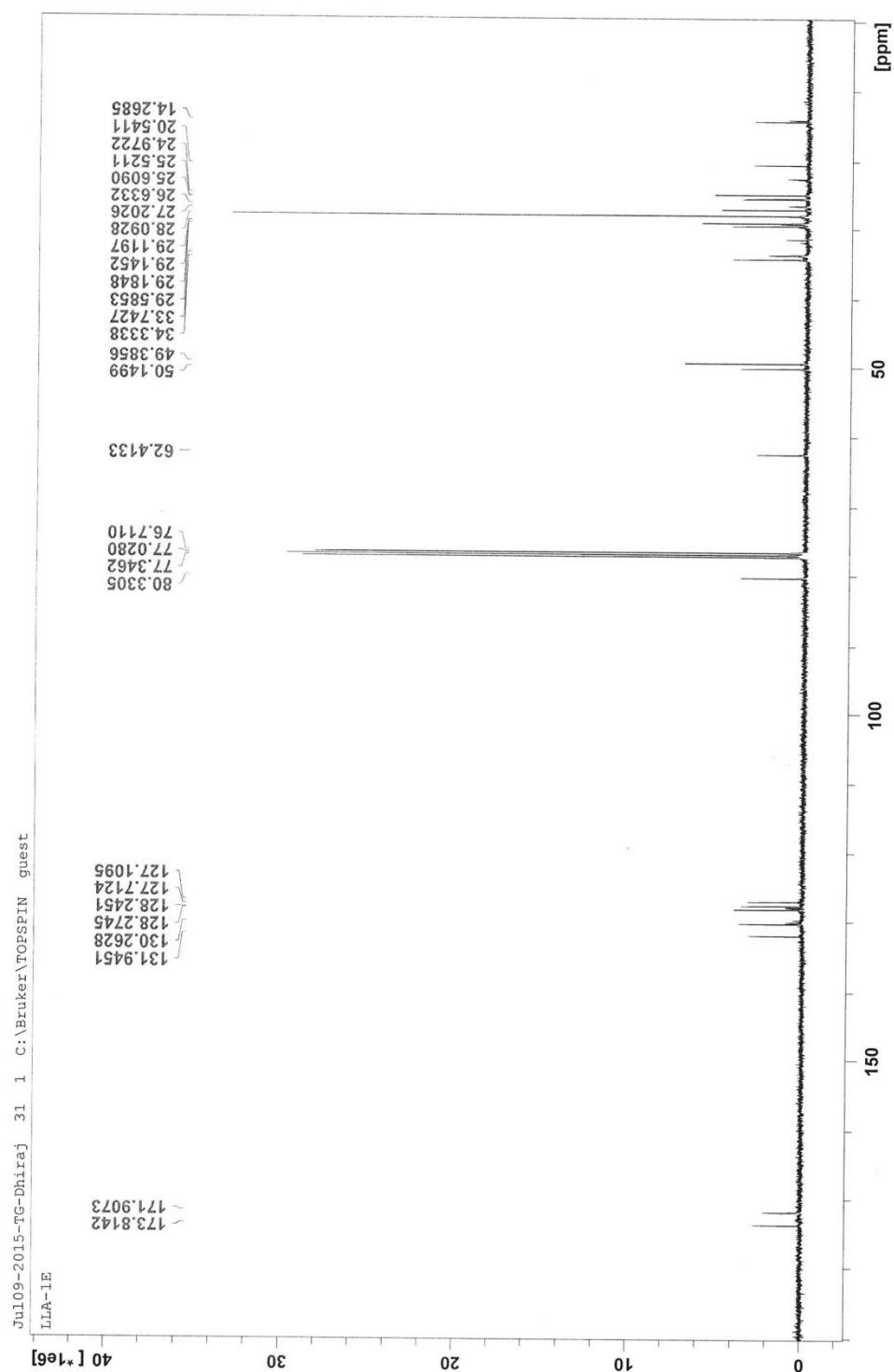
**Fig. S3.**  $^{13}\text{C}$  NMR of LA1E **3** (day 0).



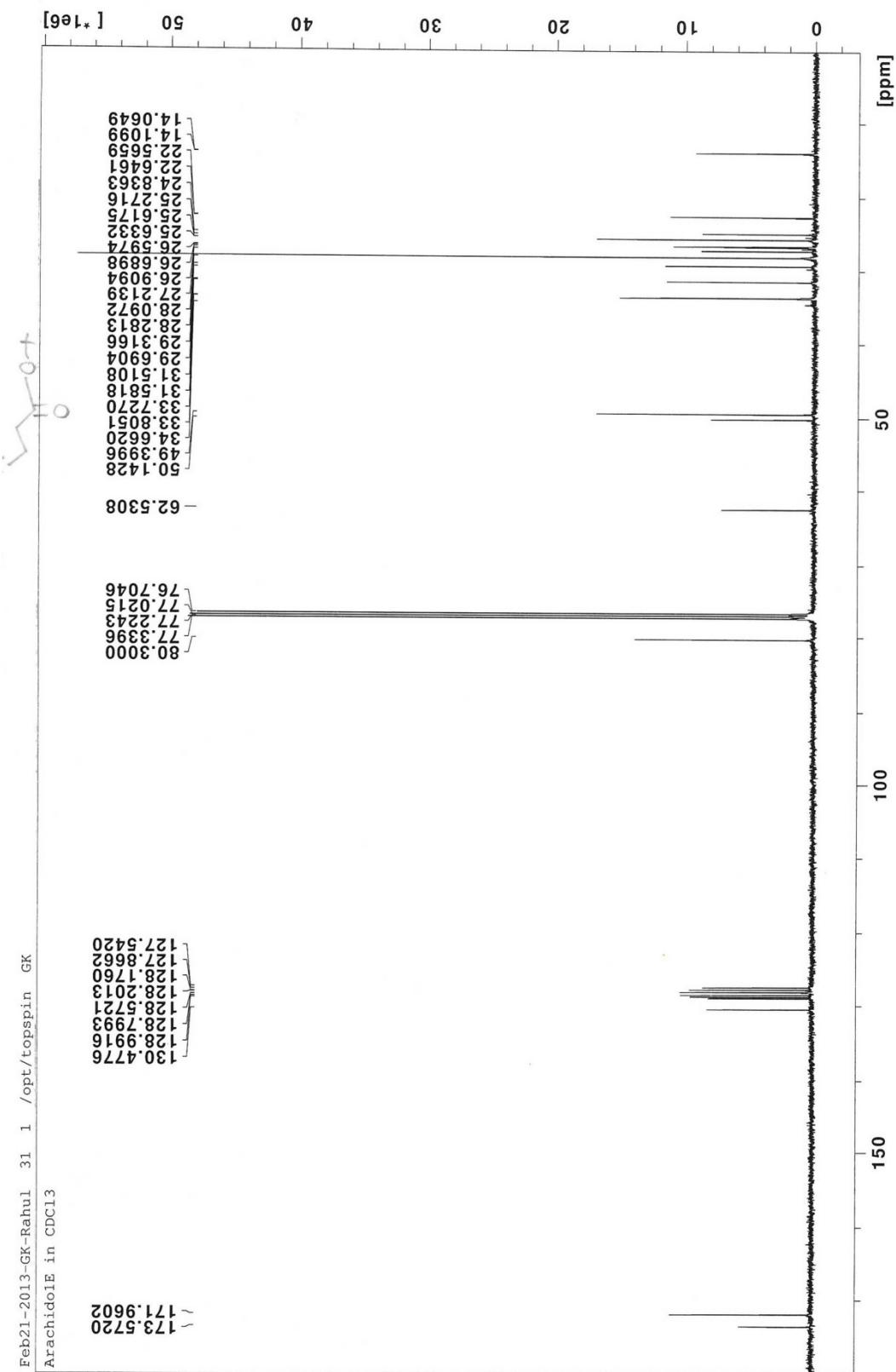
**Fig. S4.** <sup>13</sup>C NMR of LA1E **3** (2 years).



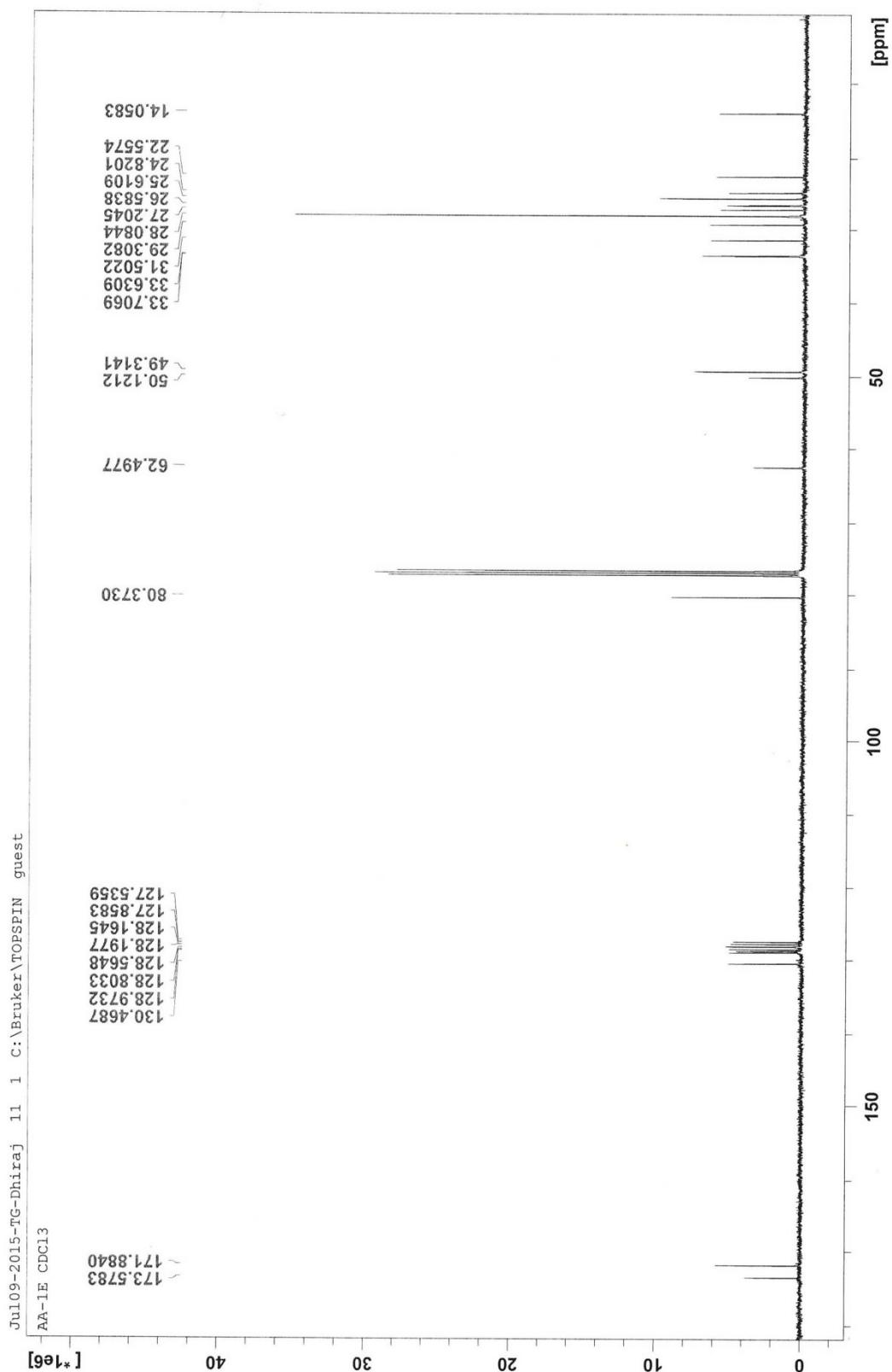
**Fig. S5.**  $^{13}\text{C}$  NMR of LLA1E 4 (day 0).



**Fig. S6.**  $^{13}\text{C}$  NMR of LLA1E 4 (2 years).



**Fig. S7.** <sup>13</sup>C NMR of AA1E **5** (day 0).



**Fig. S8.** <sup>13</sup>C NMR of AA1E 5 (2 years).