

## **Supporting Information**

# **Improved Phosphoramidite Building Blocks for the Synthesis of the Simplified Nucleic Acid GNA**

**Mark K. Schlegel and Eric Meggers**

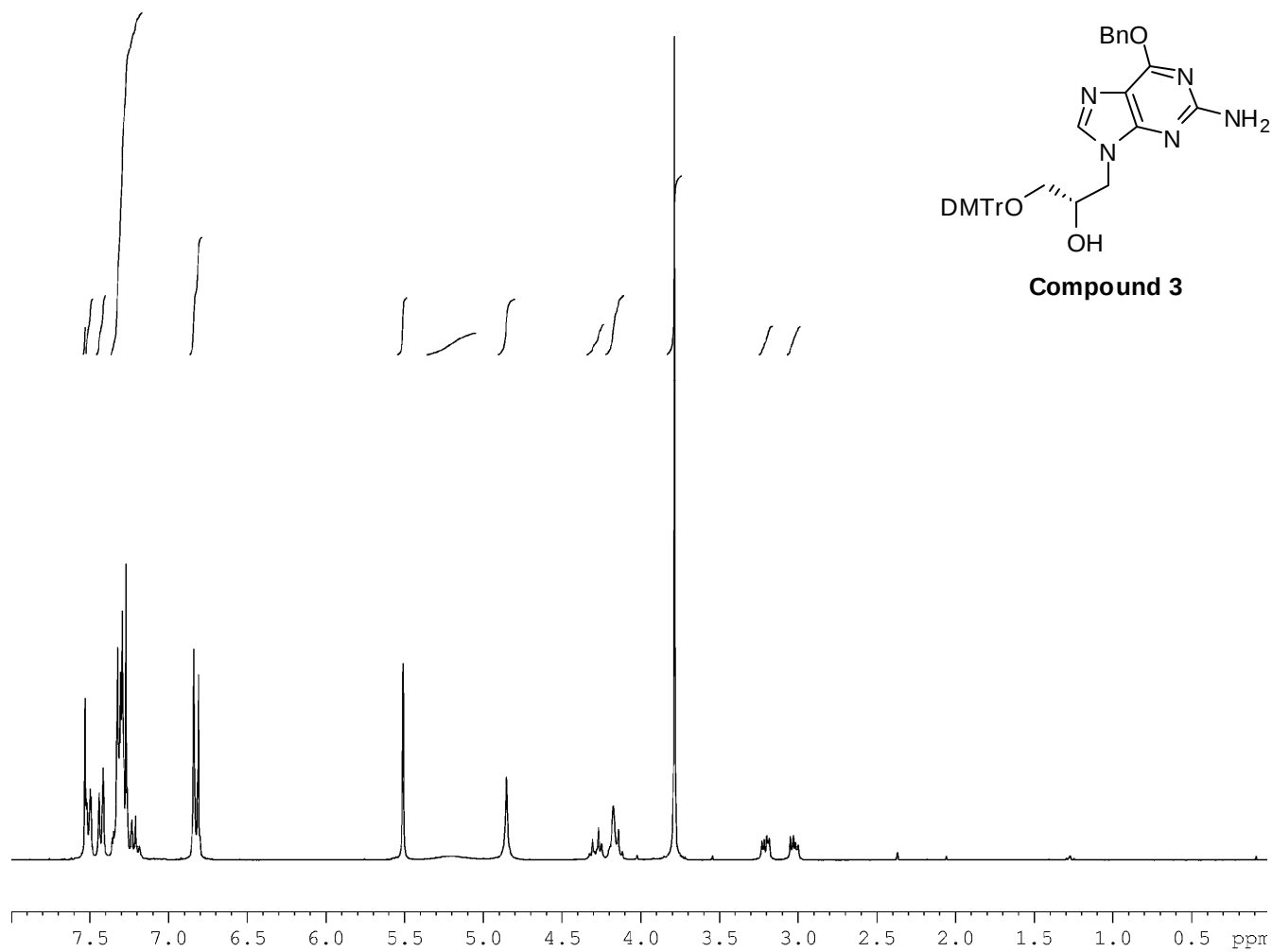
*Fachbereich Chemie, Philipps-Universität Marburg, Hans-Meerwein-Strasse, 35032*

*Marburg, Germany*

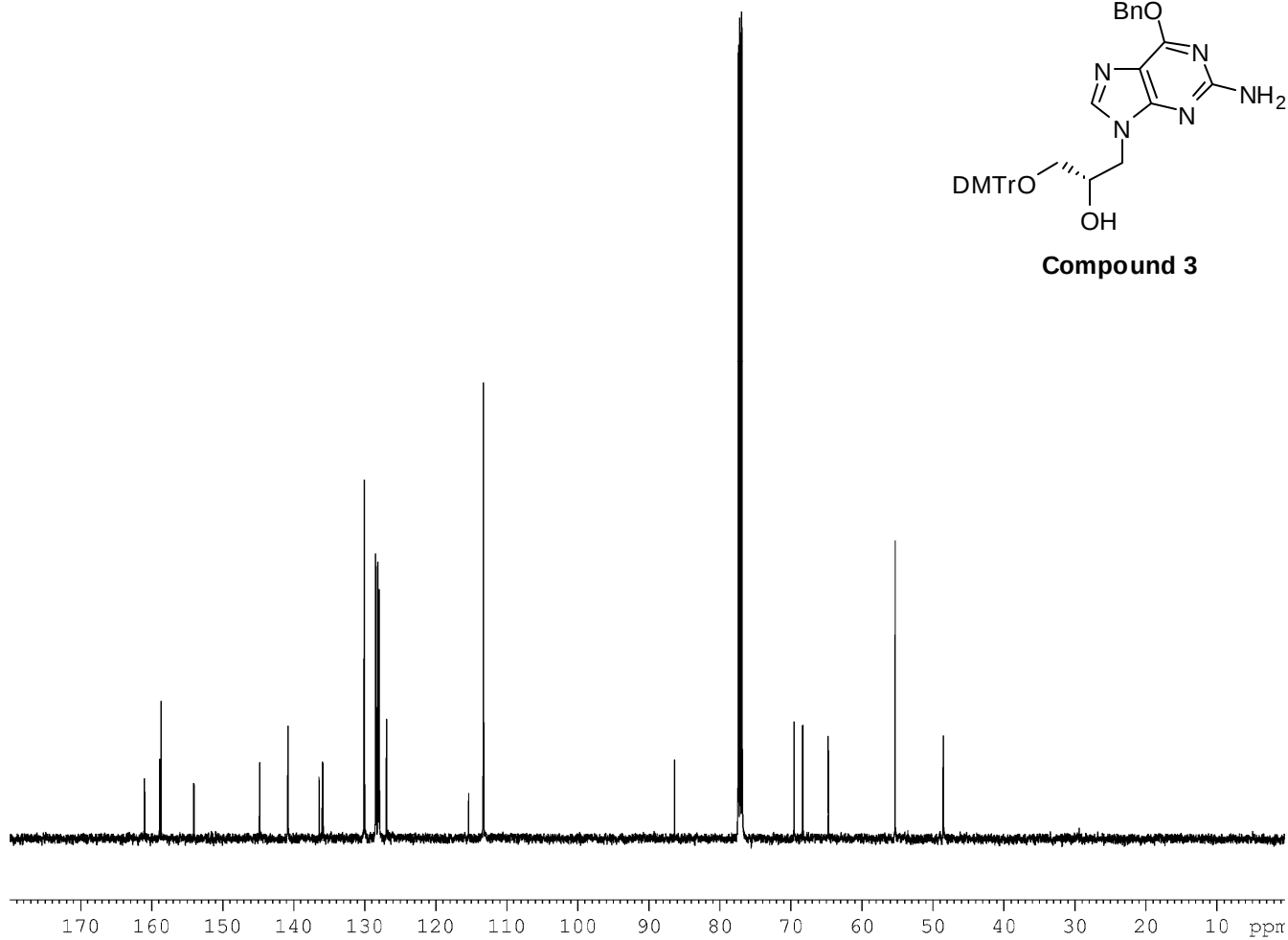
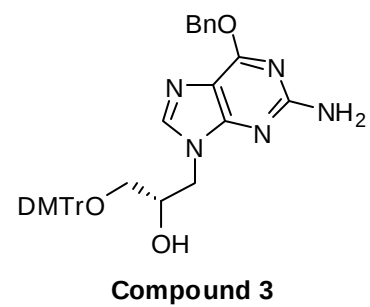
### **Table of Contents:**

- 1.)  $^1\text{H}$ - and  $^{13}\text{C}$ -NMR spectra of compounds **3**, **4**, **5**, **8**, and **10**.
- 2.)  $^{31}\text{P}$ -NMR spectra of compounds **G\***, **A\***, and **C\***.
- 3.) MALDI-TOF spectrum of the crude GNA strand 3'-CATGTCGTGCGTA-2'.

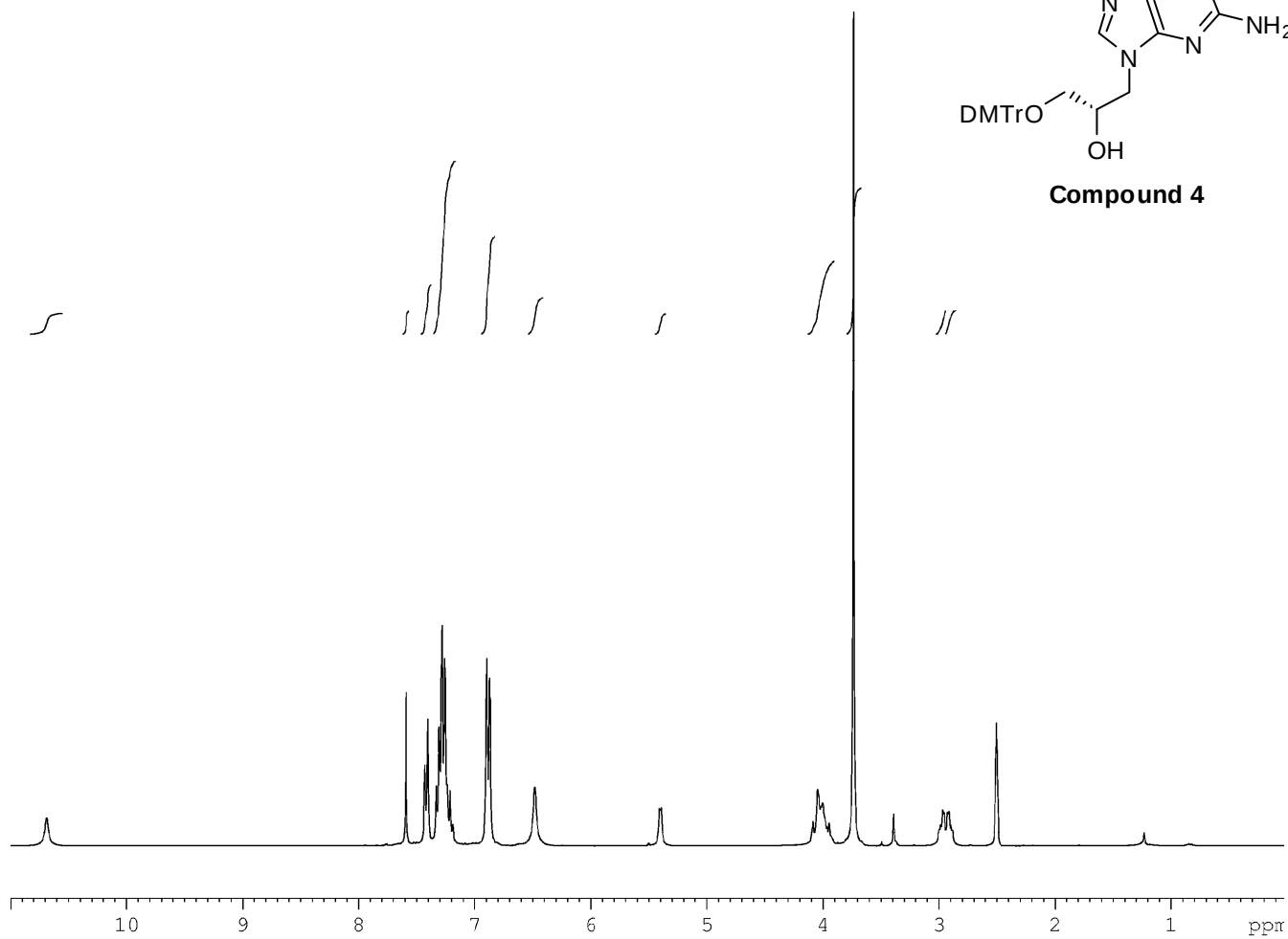
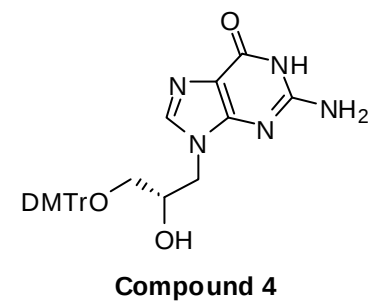
$^1\text{H}$ -NMR (300 MHz,  $\text{CDCl}_3$ )



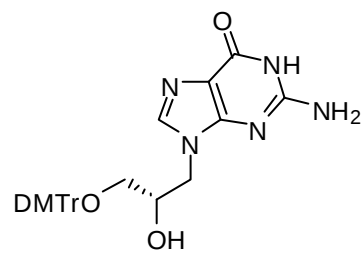
$^{13}\text{C}$ -NMR (125 MHz,  $\text{CDCl}_3$ )



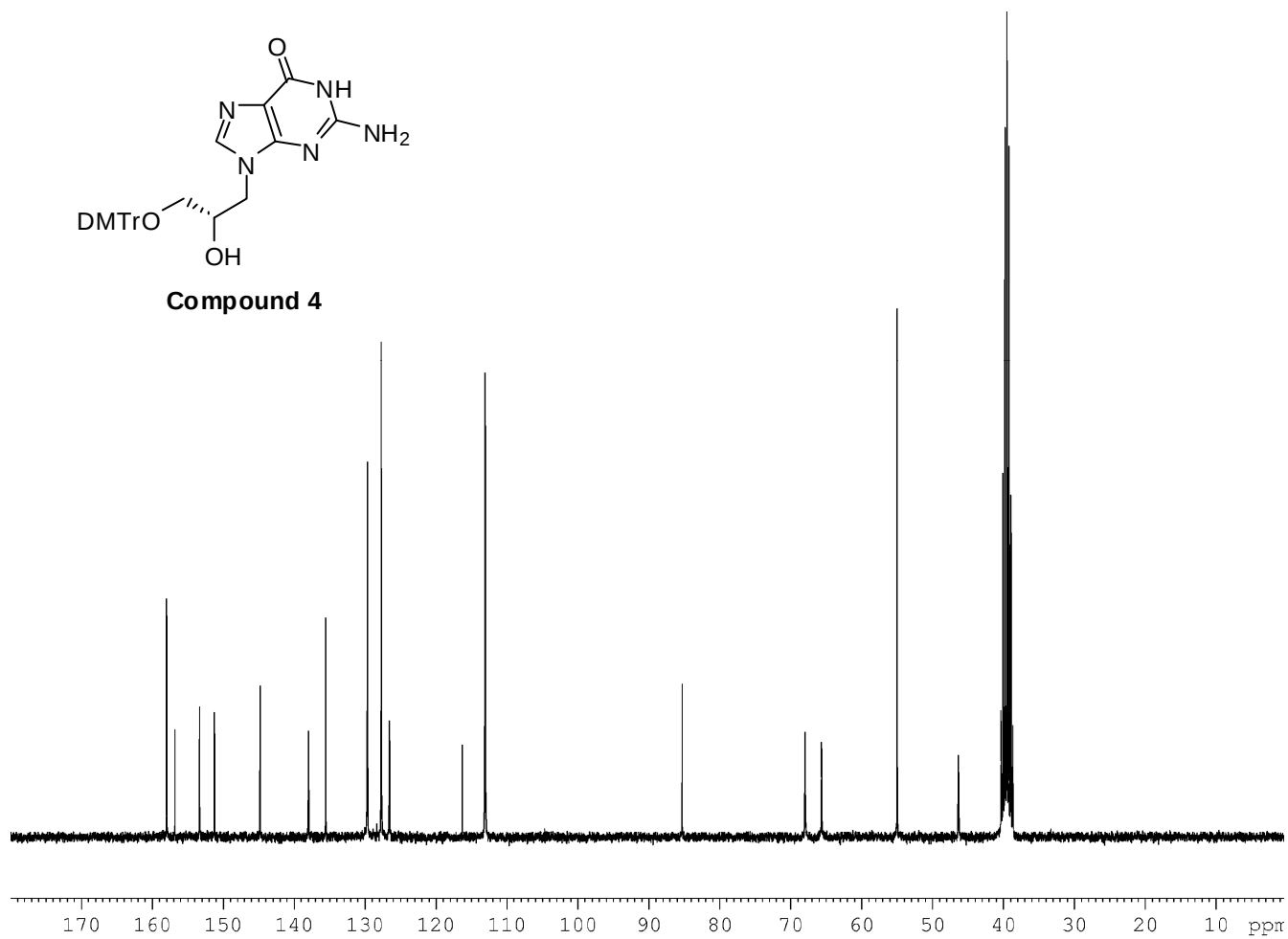
$^1\text{H}$ -NMR (300 MHz,  $\text{DMSO}-d_6$ )



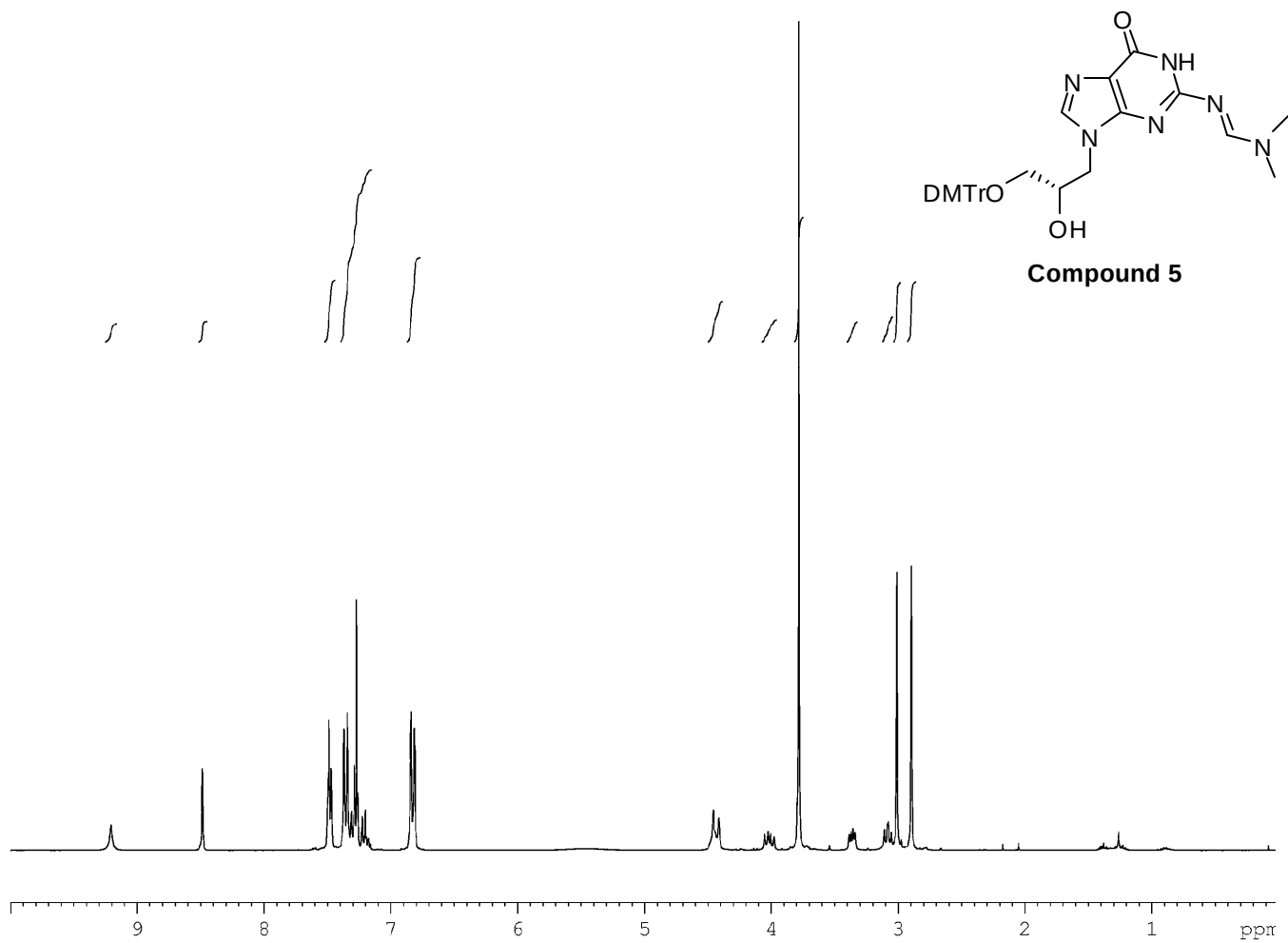
$^{13}\text{C}$ -NMR (75 MHz,  $\text{DMSO-}d_6$ )

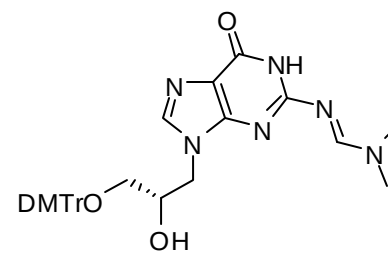


**Compound 4**

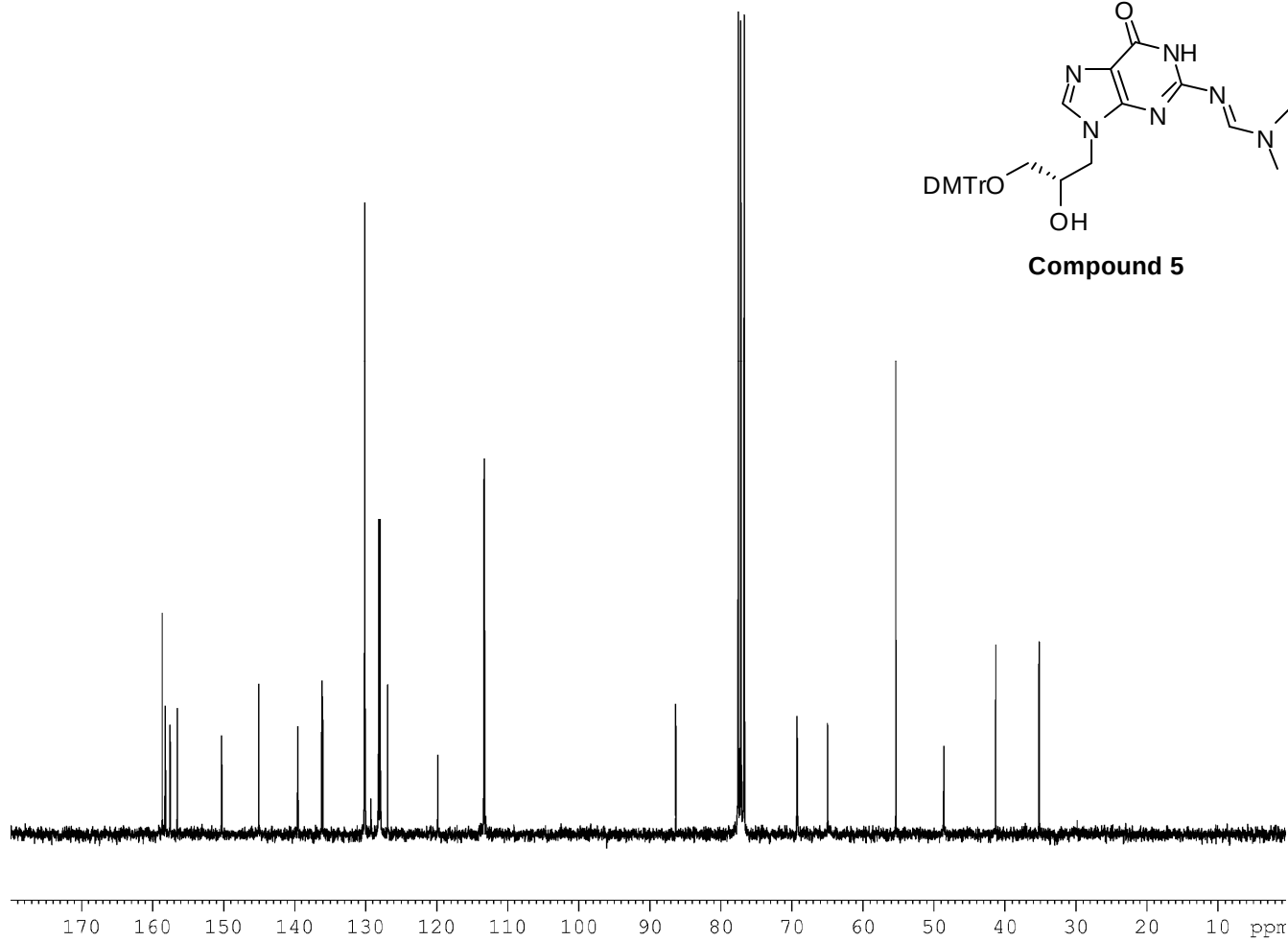


$^1\text{H}$ -NMR (300 MHz,  $\text{CDCl}_3$ )

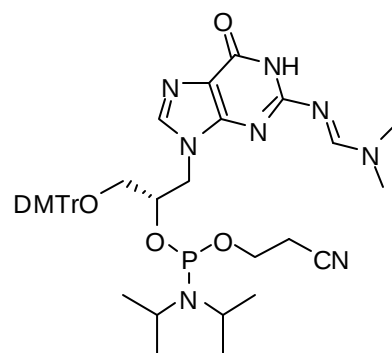


$^{13}\text{C}$ -NMR (75 MHz,  $\text{CDCl}_3$ )

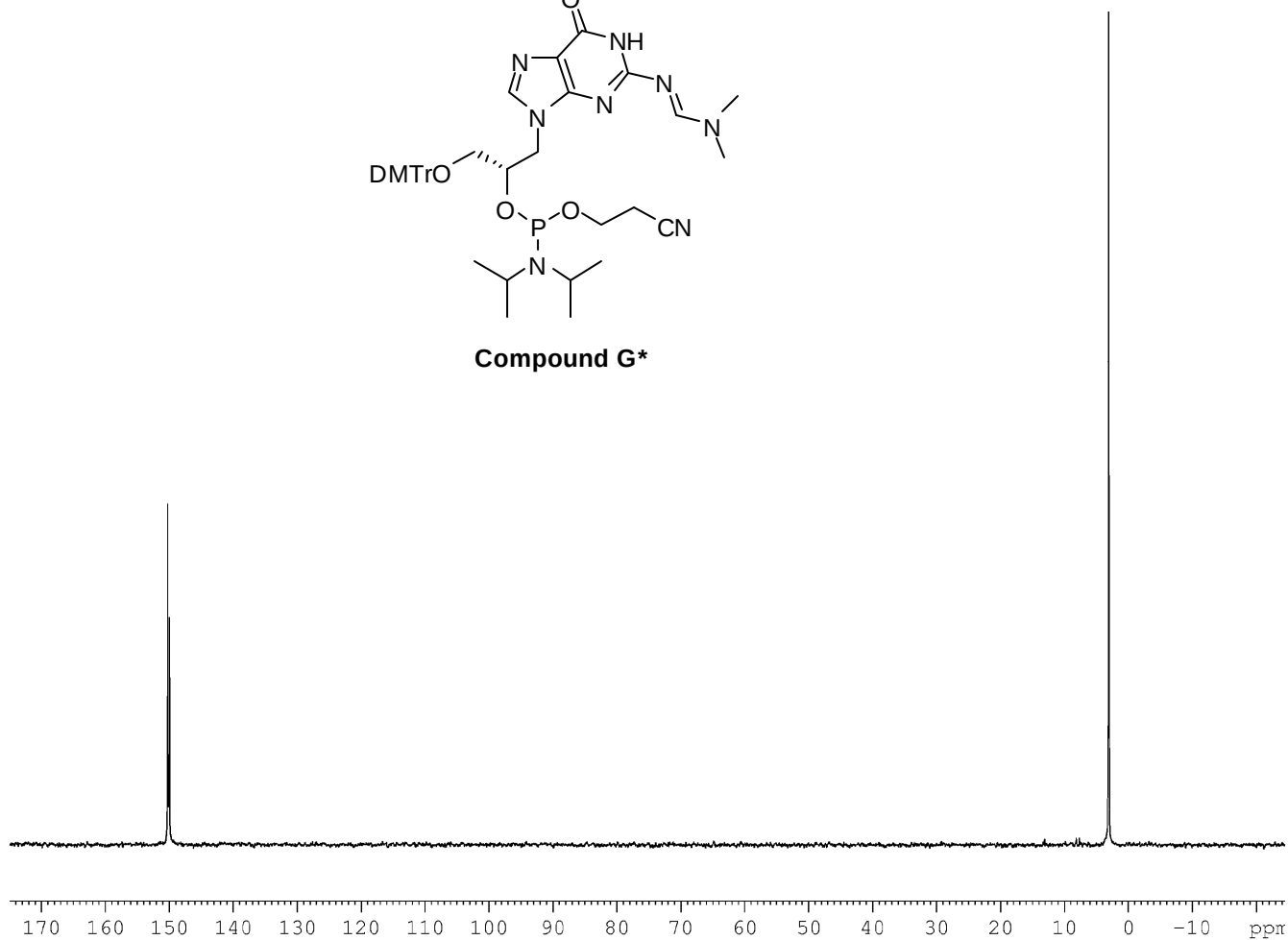
### Compound 5

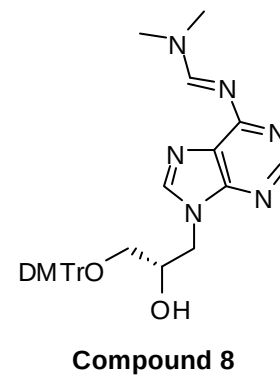
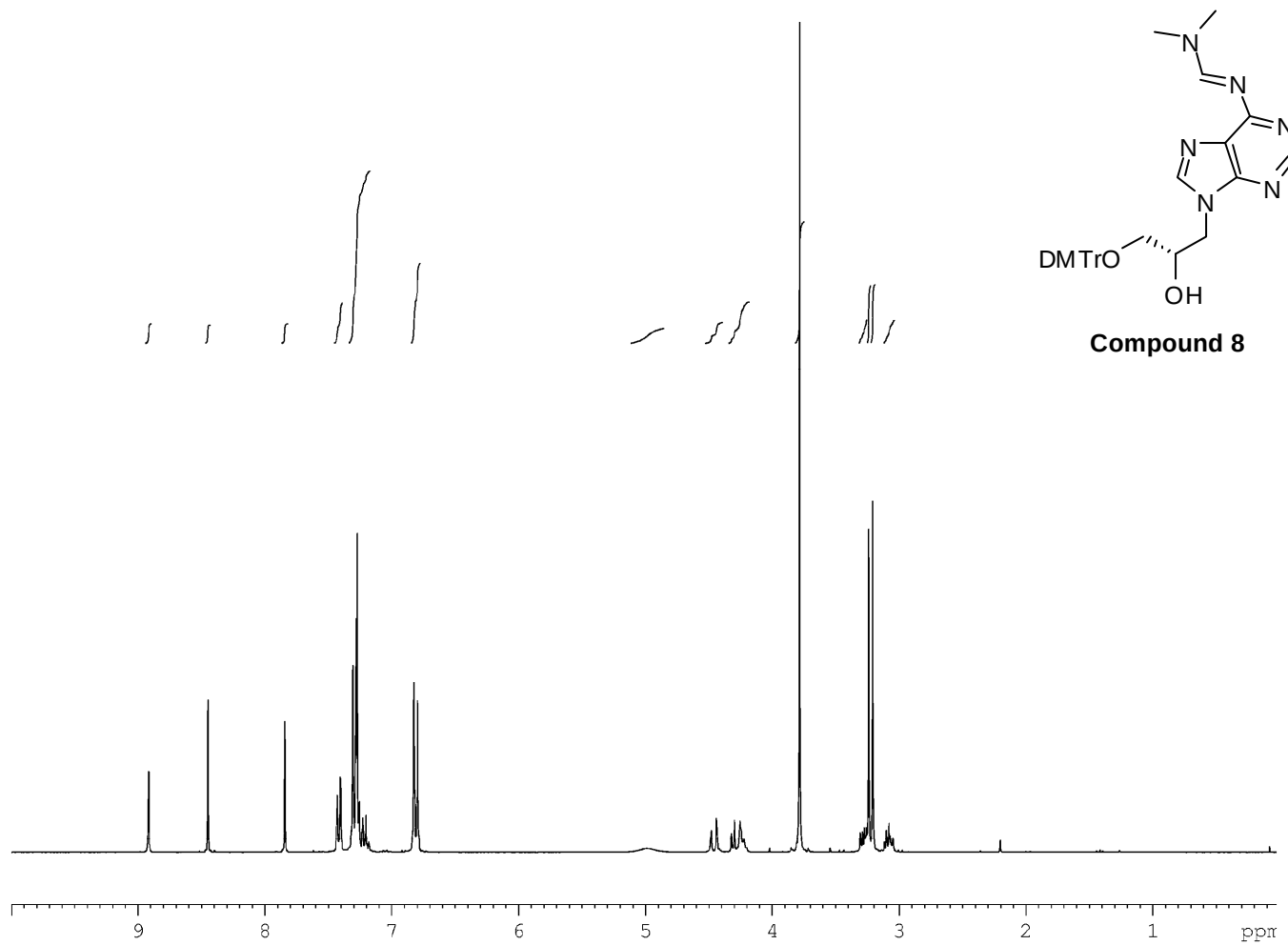


$^{31}\text{P}$ -NMR (162 MHz,  $\text{CDCl}_3$ )

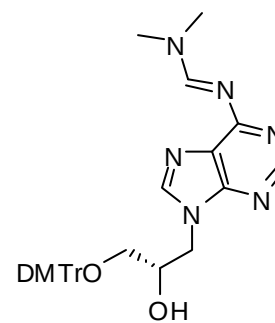


**Compound G\***

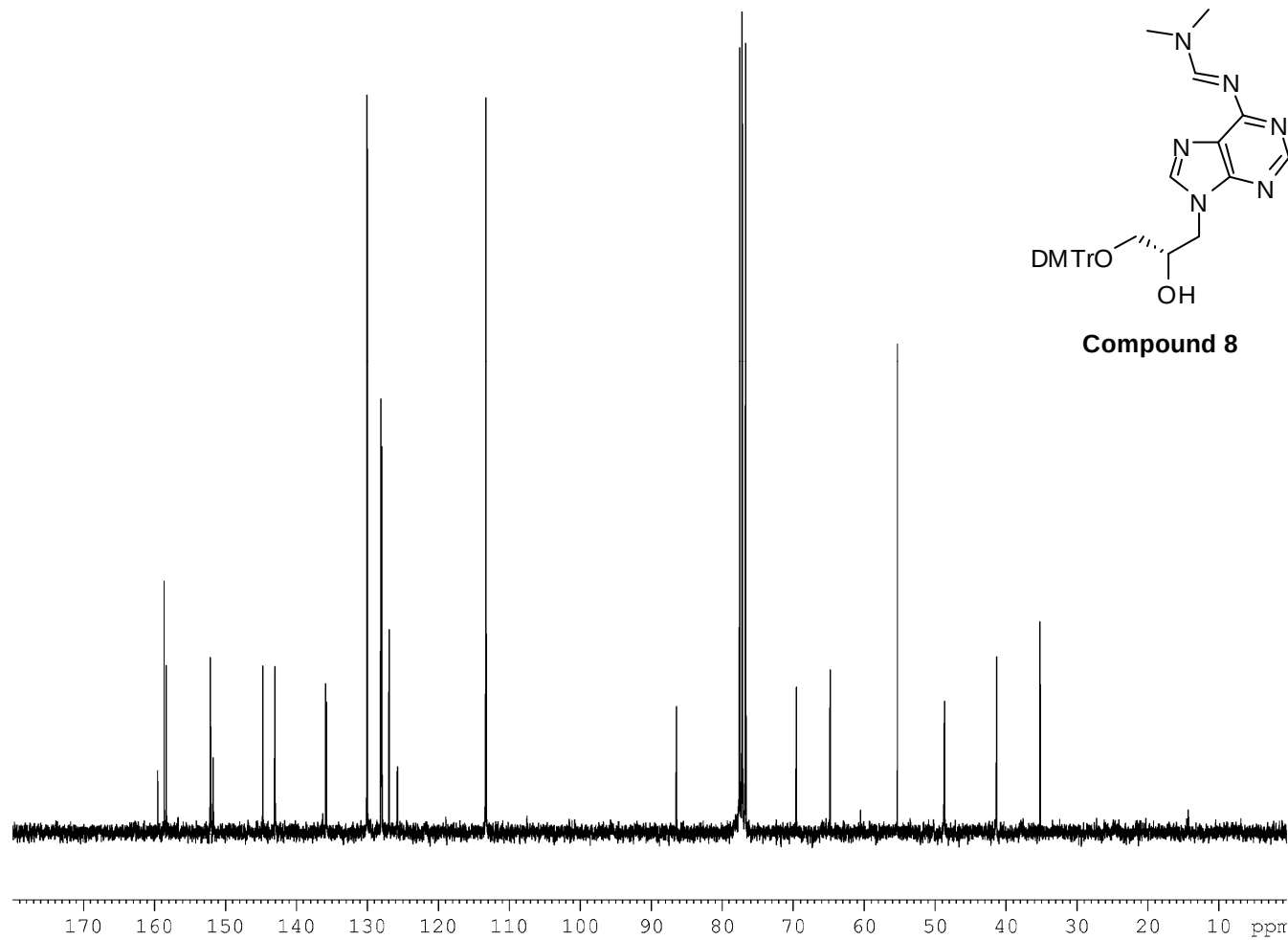


<sup>1</sup>H-NMR (300 MHz, CDCl<sub>3</sub>)

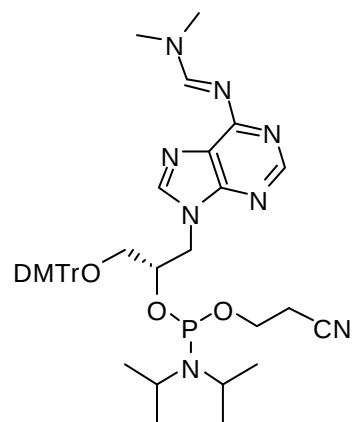
$^{13}\text{C}$ -NMR (75 MHz,  $\text{CDCl}_3$ )



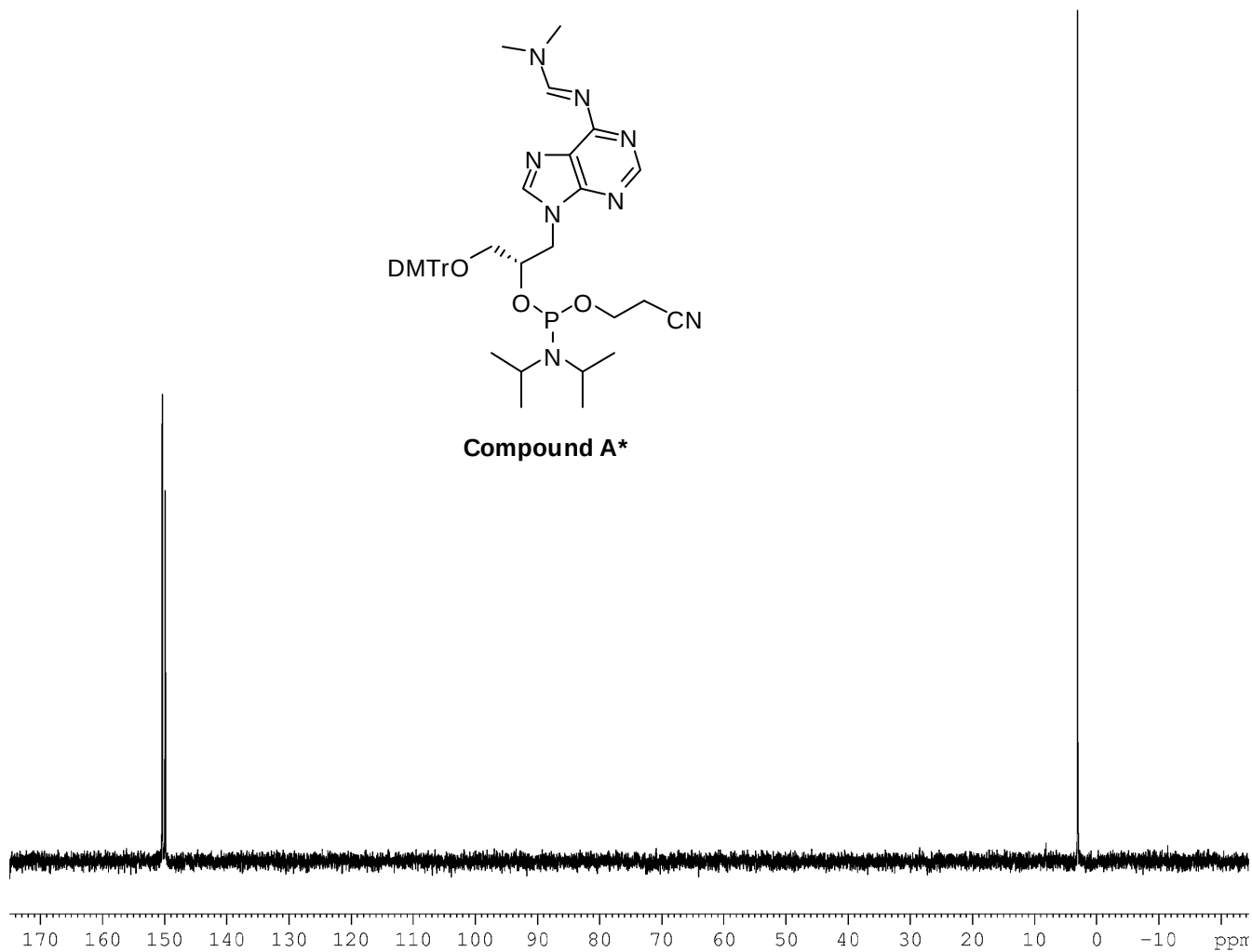
**Compound 8**



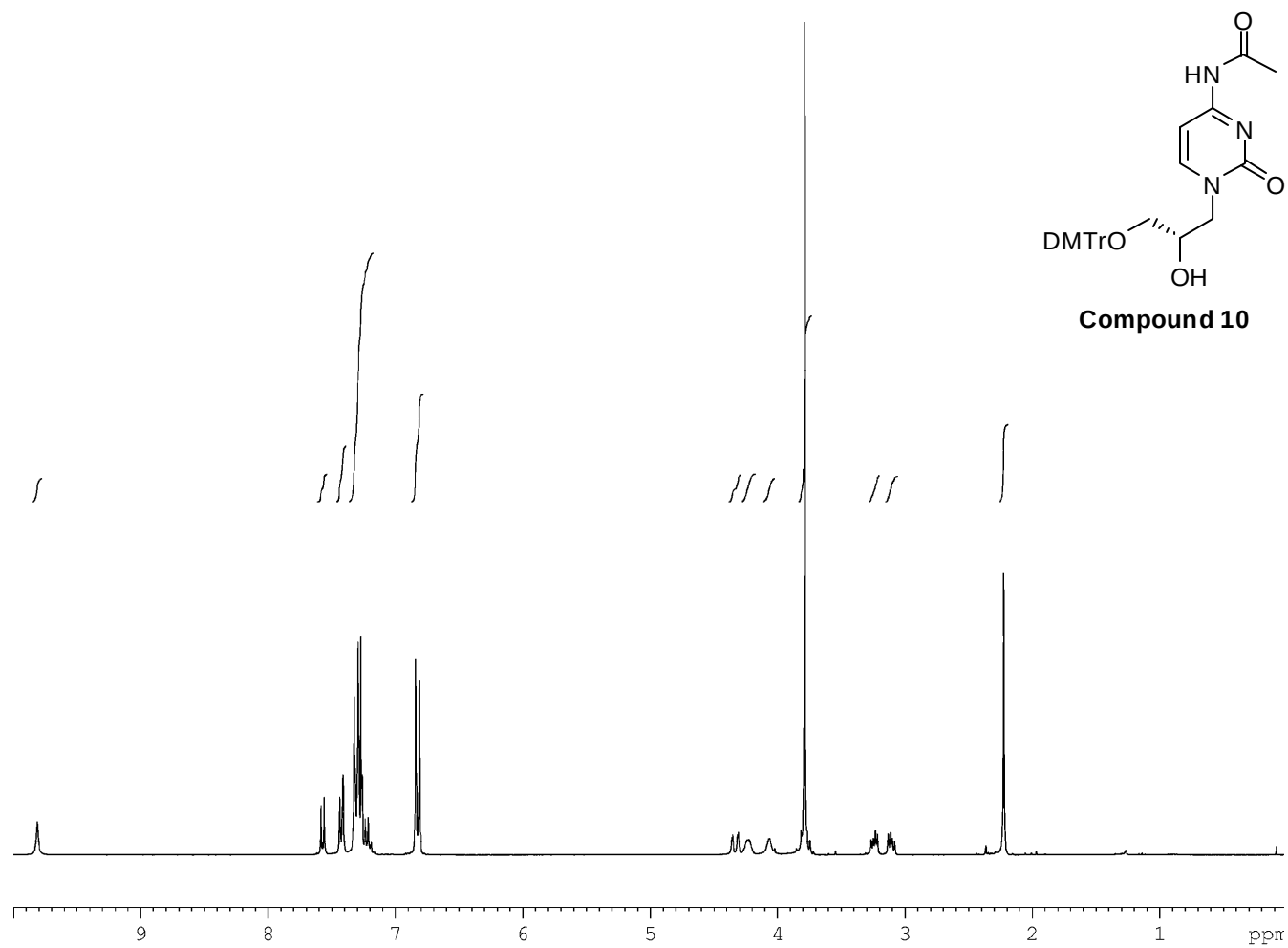
$^{31}\text{P}$ -NMR (162 MHz,  $\text{CDCl}_3$ )



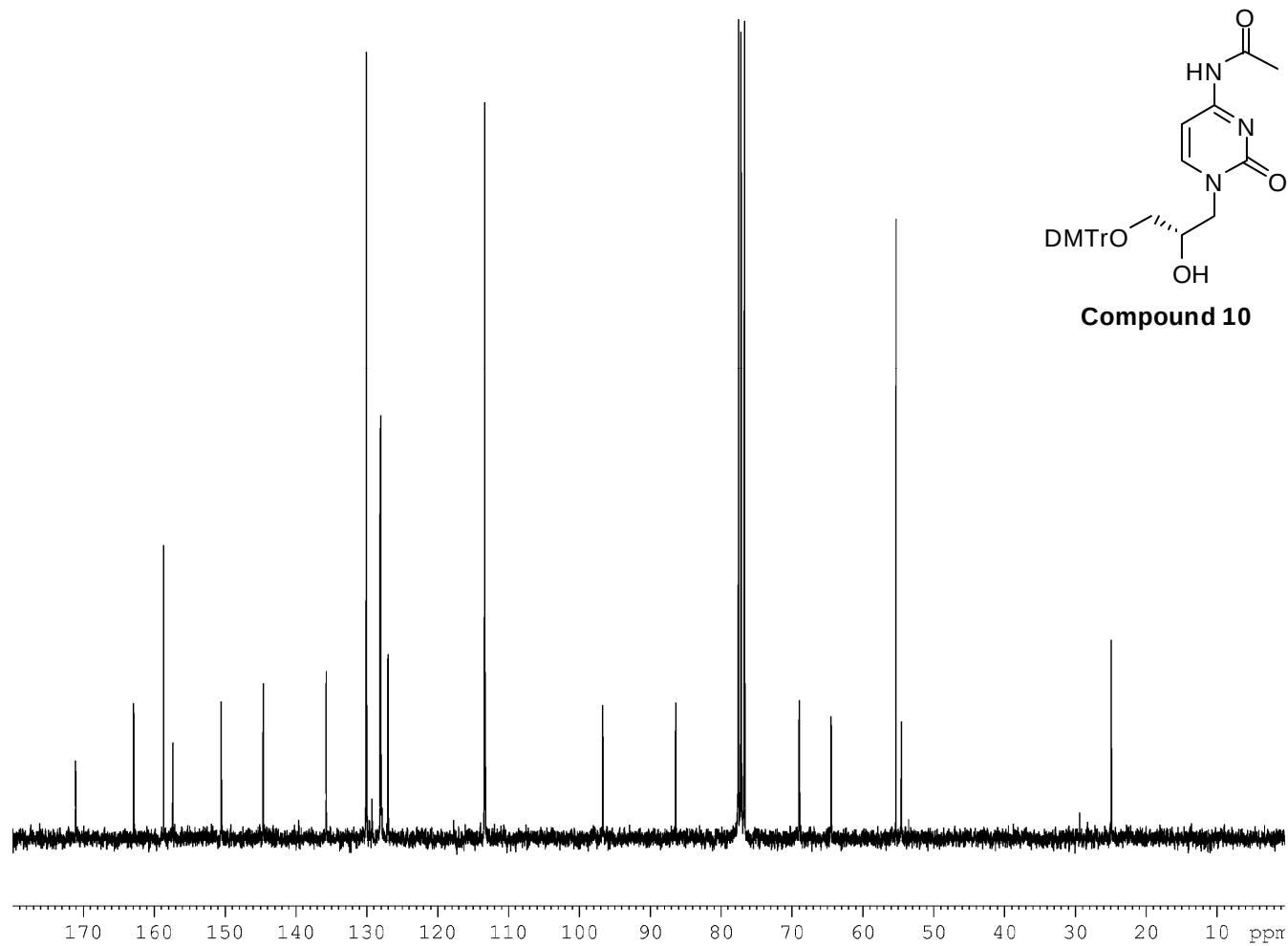
**Compound A\***



$^1\text{H}$ -NMR (300 MHz,  $\text{CDCl}_3$ )



$^{13}\text{C}$ -NMR (75 MHz,  $\text{CDCl}_3$ )



# MALDI-TOF spectrum of the crude GNA strand 3'-CATGTCGTGCGTA-2'

