Medium optimization of *Streptomyces* sp. 17944 for tirandamycin B production and isolation and structural elucidation of tirandamycins H, I, and J

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Running head: Tirandamycin B and congeners from *Streptomyces* sp. 17944

Keywords: AsnRS inhibitor, filariasis, medium optimization, *S.* sp 17944, tirandamycin

Supplementary Information

General experimental procedures

Optical rotations were measured in methanol on a Perkin-Elmer 241 instrument at the sodium D line (589 nm). The UV spectra were acquired in methanol using Thermo Scientific NanoDrop 2000C UV-Vis spectrophotometer. ^{1}H and ^{13}C NMR spectra were recorded at 25°C with a Bruker Avance III 700 MHz ULTRA Shield. HRESIMS were acquired with a Bruker Daltonics Ultra High Resolution TOF – Maxis spectrometer. Semi-preparative HPLC was performed on a Varian HPLC system with an Altima C-18 column (5 μ, 10.0 x 250 mm, Alltech, Deerfield, IL). Column chromatography was performed using SiO_2 (230-400 mesh, Natland International Corporation, Research Triangle Park, NC) and Sephadex LH-20 (Pharmacia, Kalamazoo, MI). All chemical reagents were purchased from Sigma-Aldrich (St. Louis, MO) and used without further purification.

S. sp. 17944,[1] *E. coli* ET12567,[2] pSET152,[3] pKC1139,[3] and ISP-2,[2] ISP-4,[2] TSB,[2] MS,[2] SLY[4,5] were previously described. All common antibiotics are from standard commercial sources. DNA isolation, cloning, sequencing, PCR, and other standard microbiology and recombinant DNA experiments followed manufacture's protocols or literature procedures.[2,6]

References

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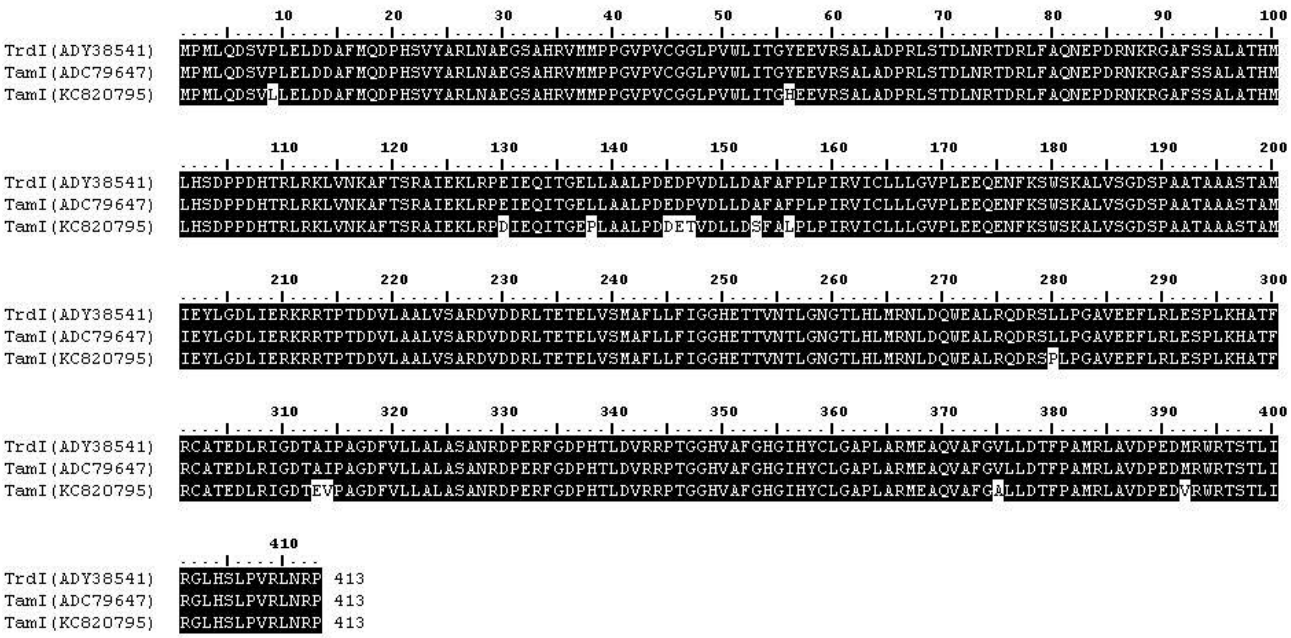

Figure S1. Sequence alignment of TamI from *S.* sp. 17944 and its homologues TamI from *S.* sp. 307-9 and TrdI from *S.* sp. SCSIO 1666. TrdI (ADY38541) and TamI (ADC79647) are protein accession numbers and TamI (KC820795) is the nucleotide accession number at GenBank, and multiple sequence alignments were performed by using the CLUSTAL X program.

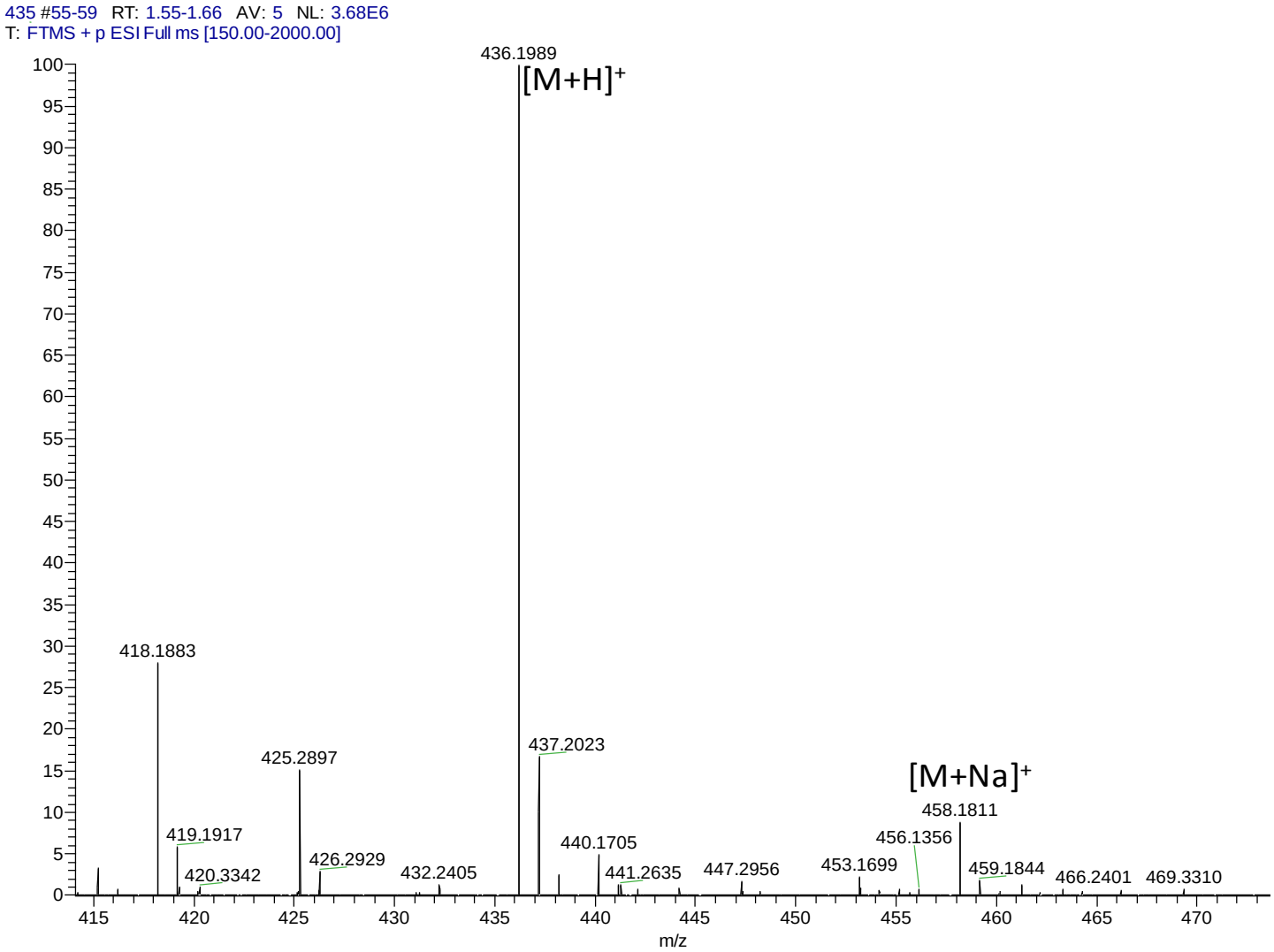

Figure S2. HRESIMS spectrum of TAM H (**6**)

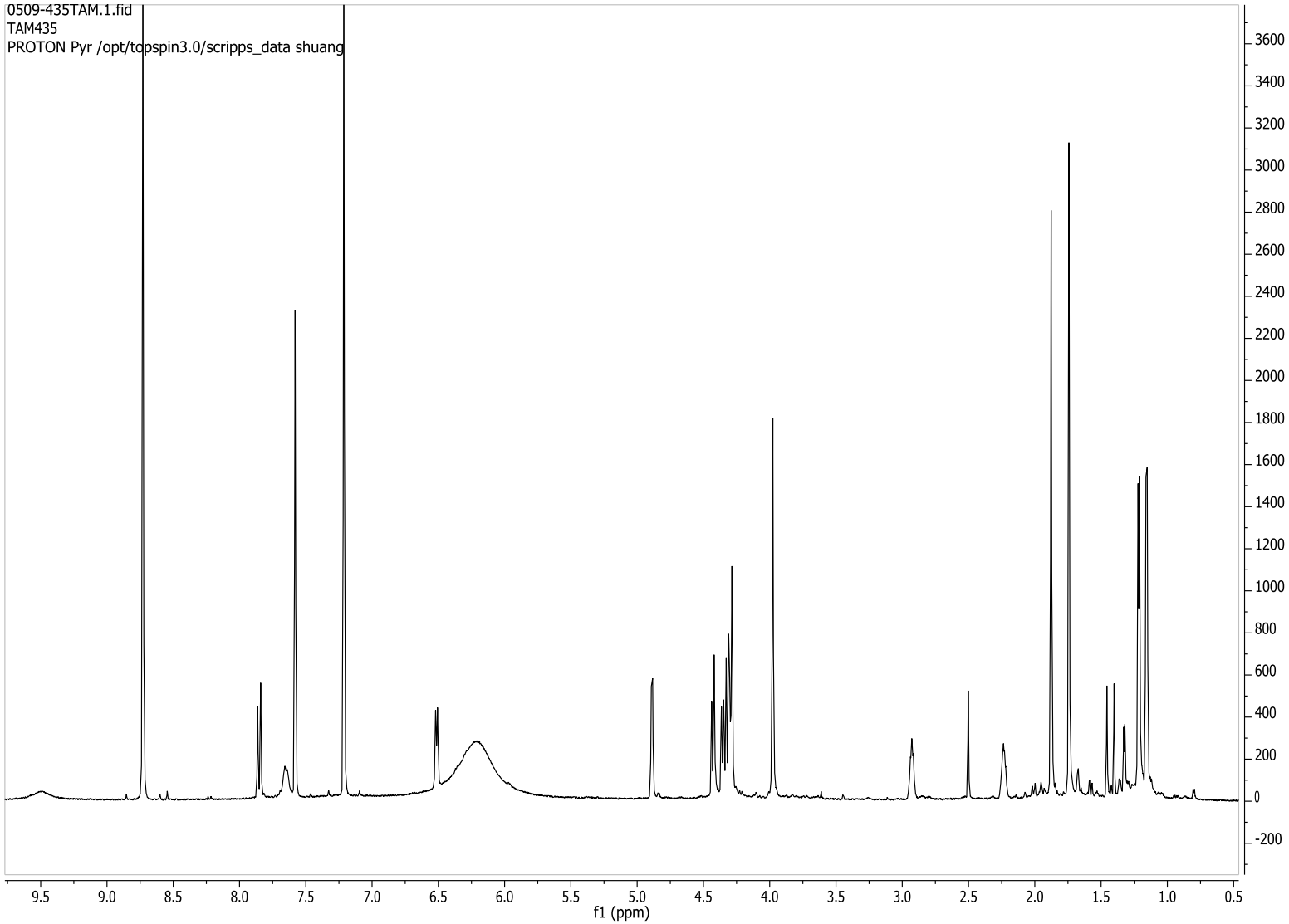

Figure S3. ^{1}H NMR spectrum of TAM H (**6**)

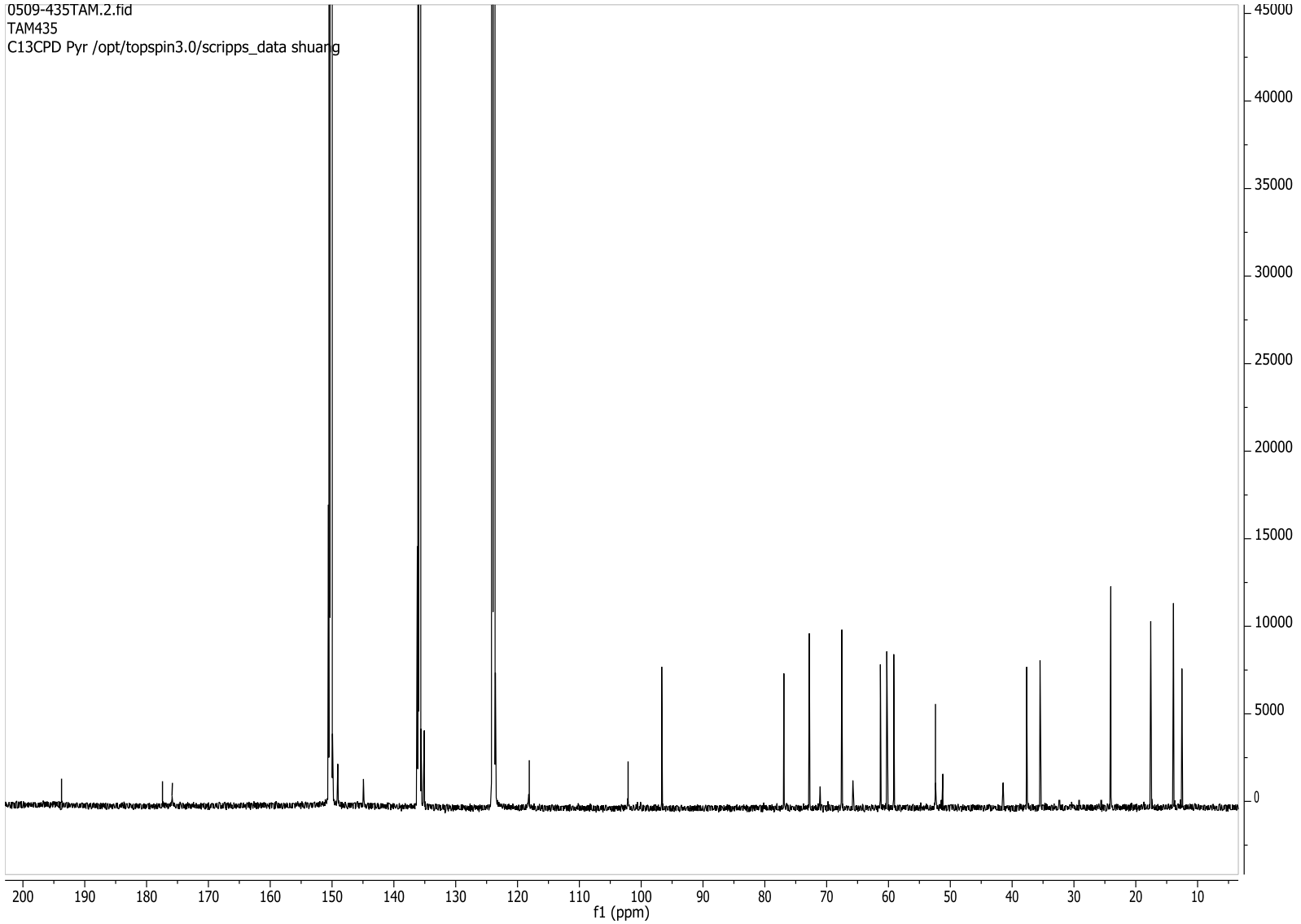

Figure S4. ^{13}C NMR spectrum of TAM H (**6**)

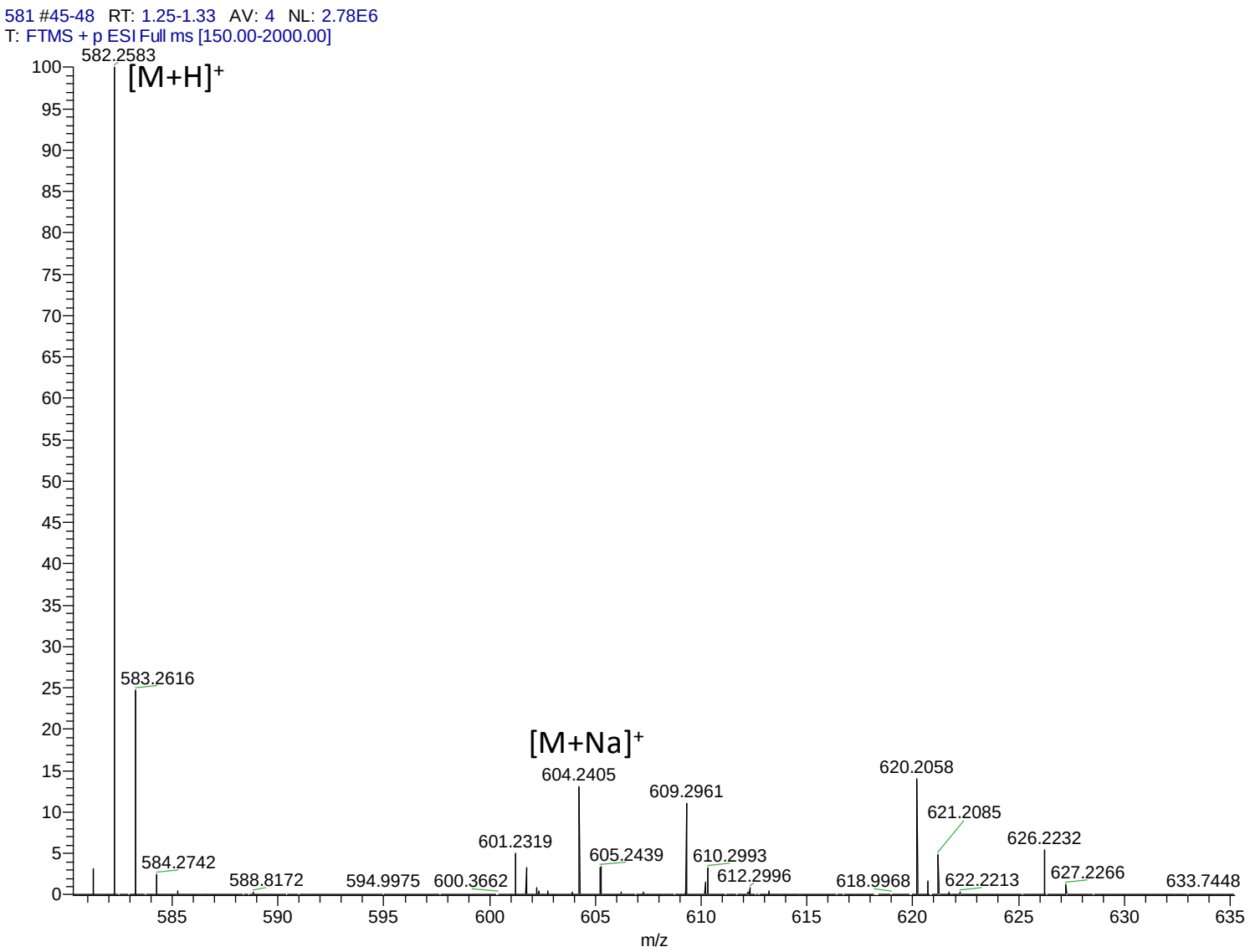

Figure S5. HRESIMS spectrum of TAM I (**7**)

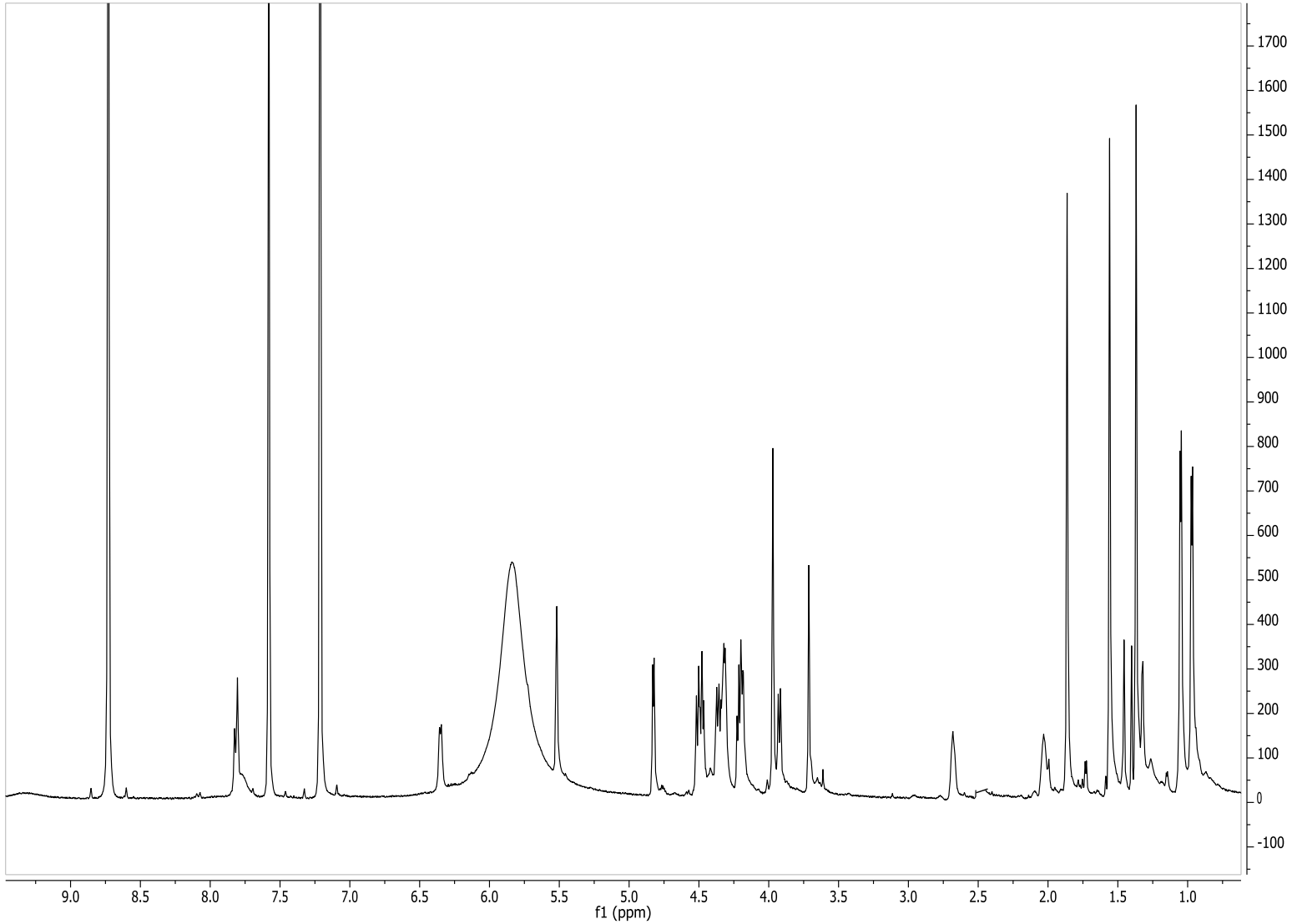

Figure S6. ^{1}H NMR spectrum of TAM I (**7**)

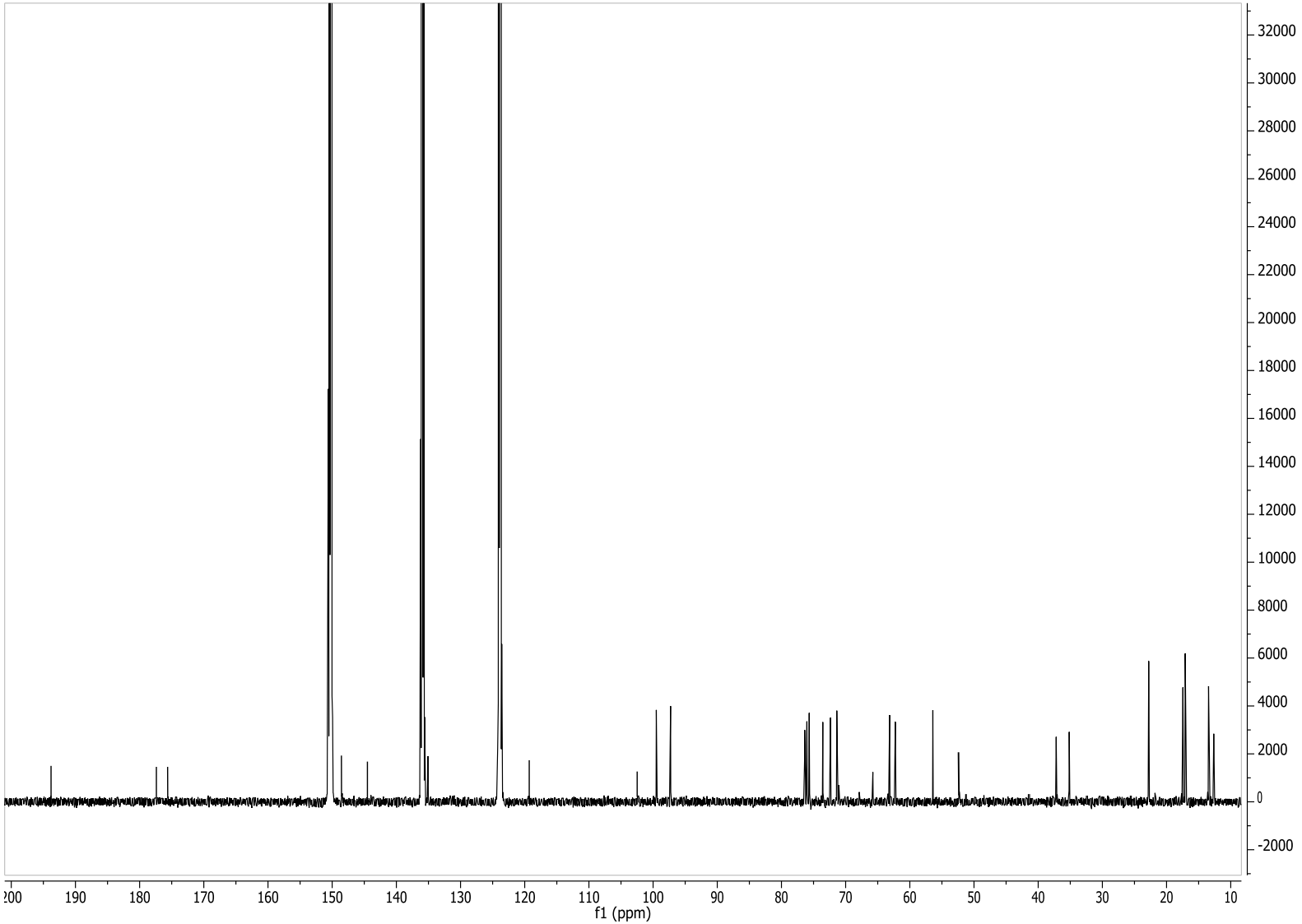

Figure S7. ^{13}C NMR spectrum of TAM I (**7**)

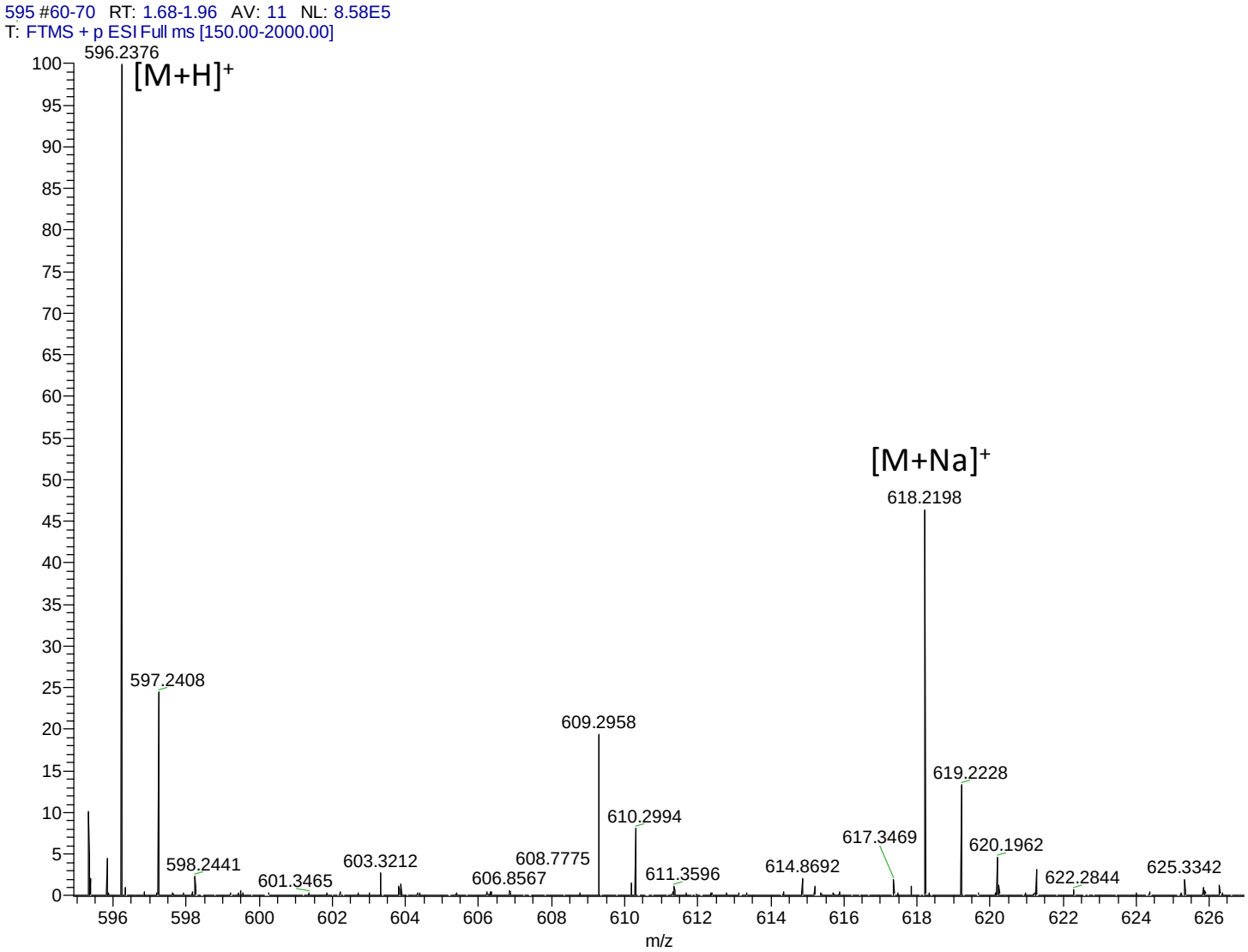

Figure S8. HRESIMS spectrum of TAM J (**8**)

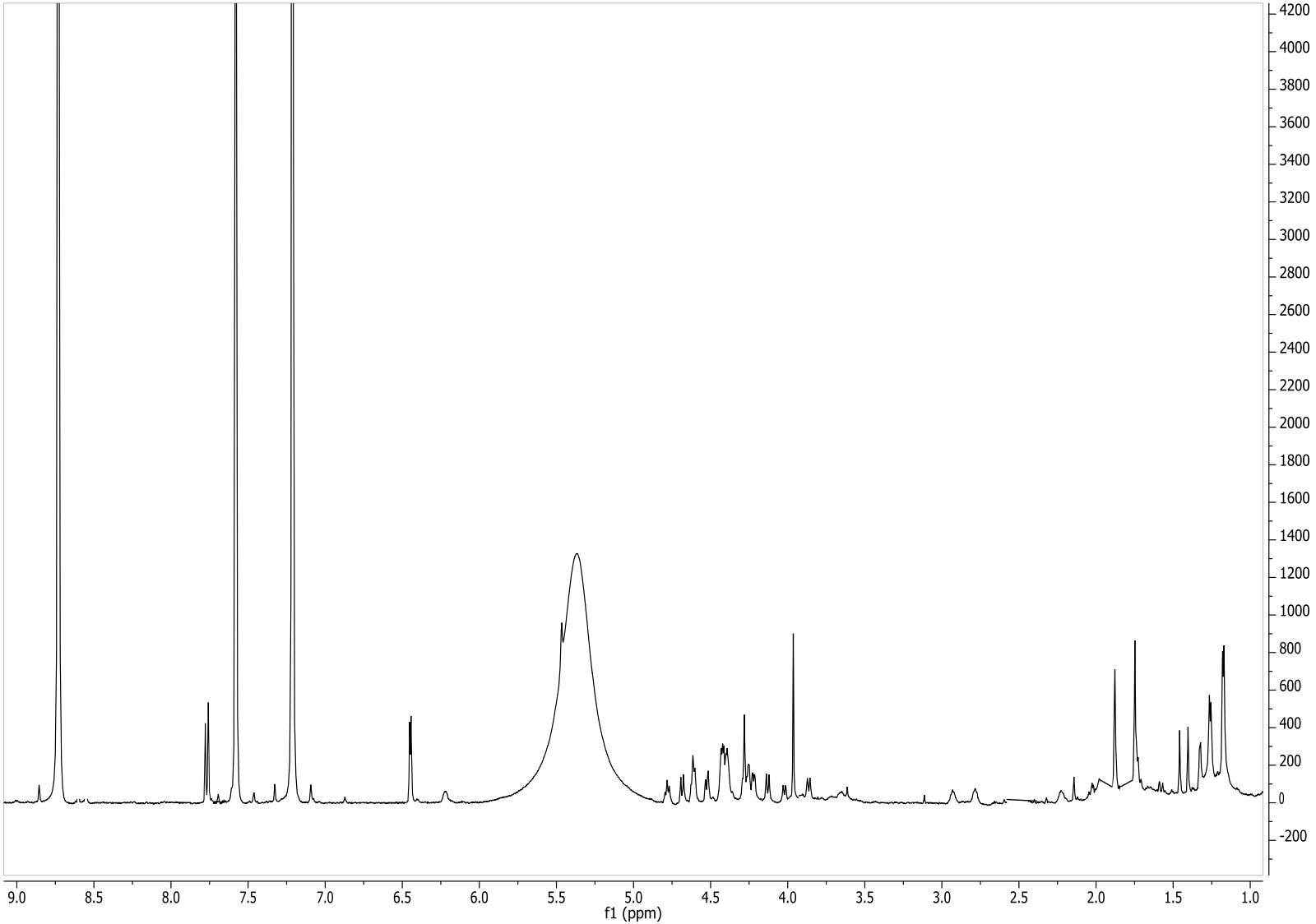

Figure S9. ^{1}H NMR spectrum of TAM J (**8**)

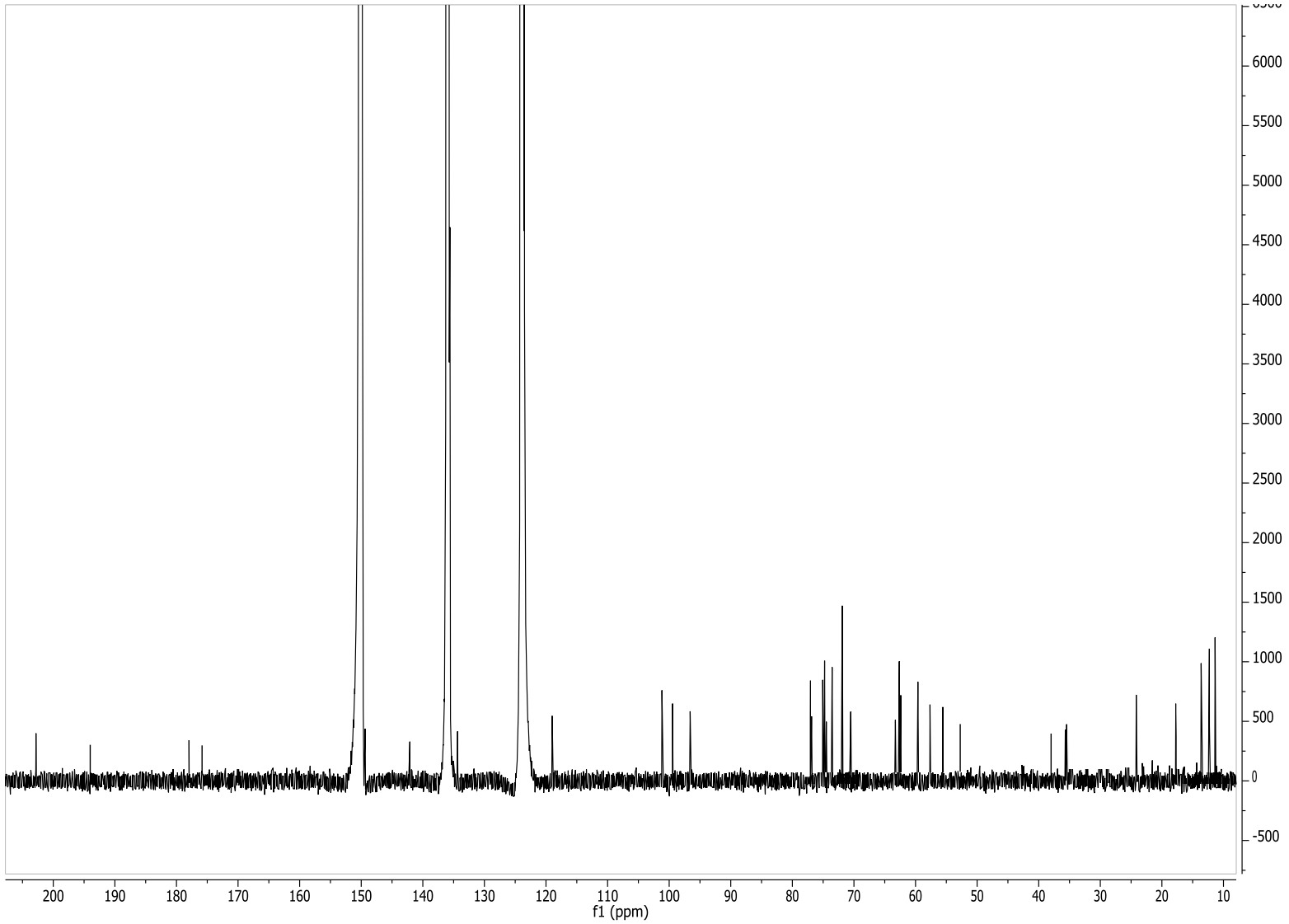

Figure S10. ^{13}C NMR spectrum of TAM J (**8**)