

Supplementary Information

Fluorine- and rhenium-containing geldanamycin derivatives as leads
for the development of molecular probes for imaging Hsp90

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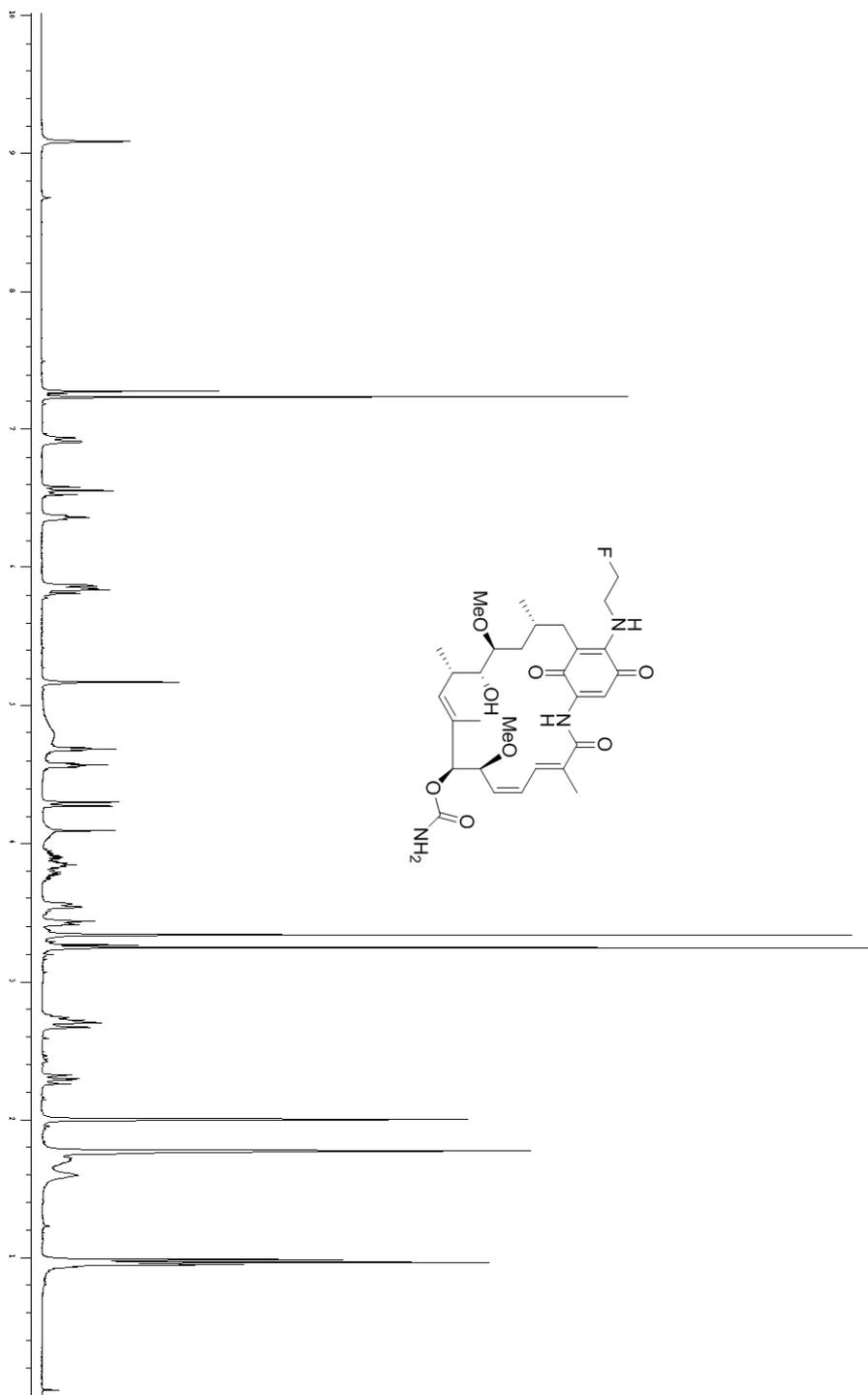
¹H-NMR spectra of compounds 1, 2, 3, 5, 7, and 15

¹⁹F-NMR spectra of compounds 1, 2, 3, 5 and 7

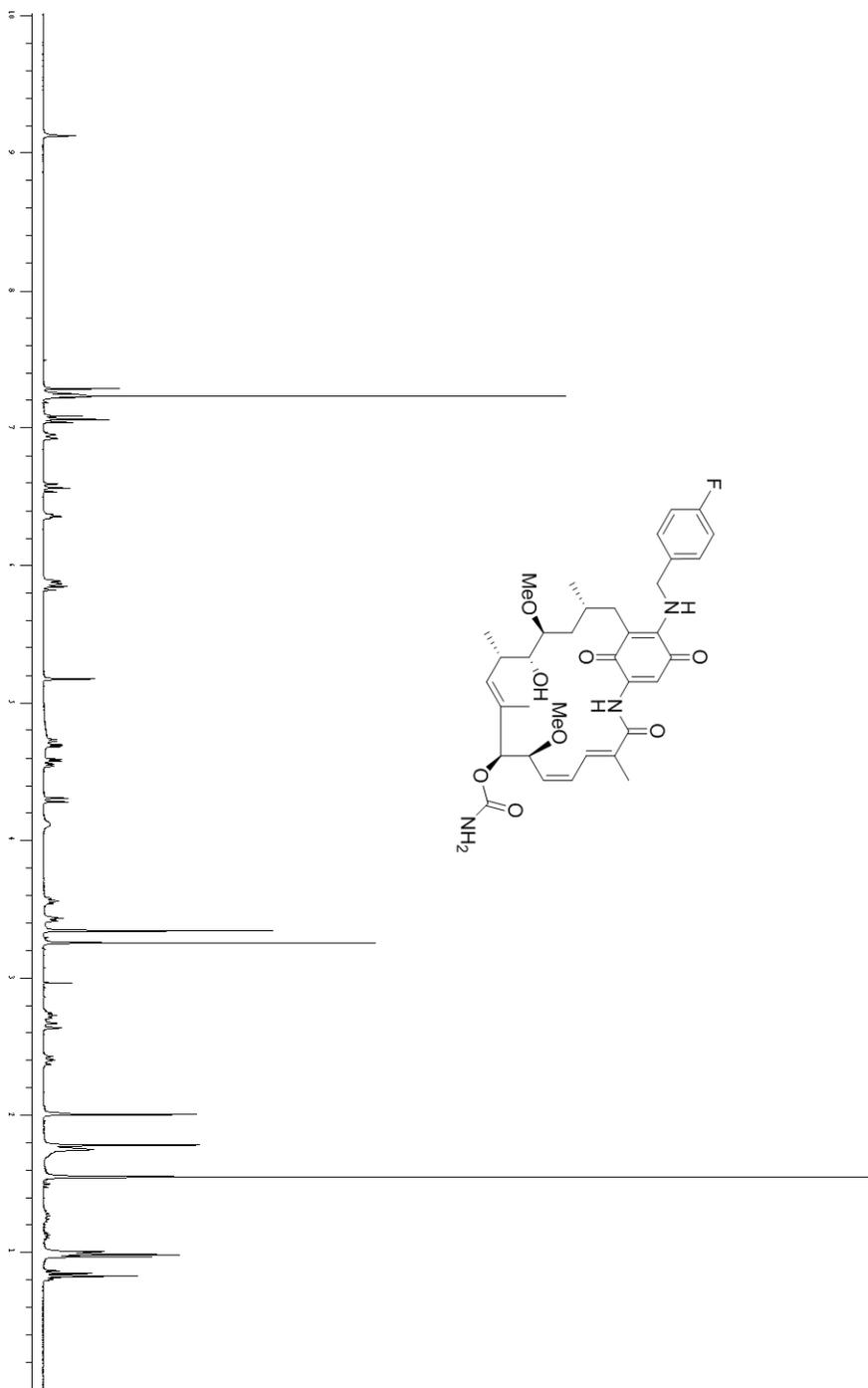
HPLC analyses of compounds 1, 2, 3, 5, 7, and 15

Mass spectra of compounds 1, 2, 3, 5, 7, and 15

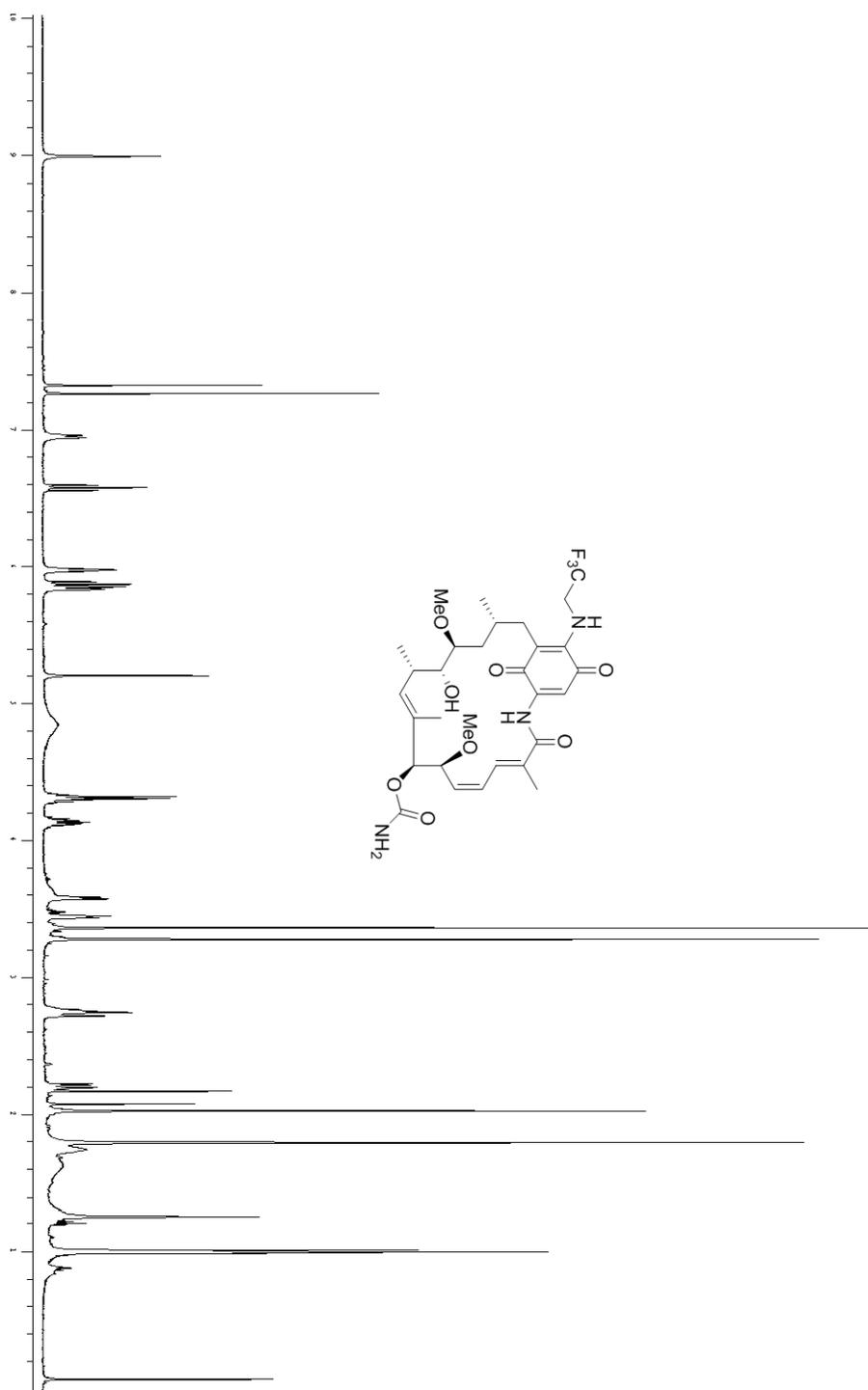
$^1\text{H-NMR}$: 17-(2-Fluoroethylamino)-17-demethoxy-geldanamycin 1



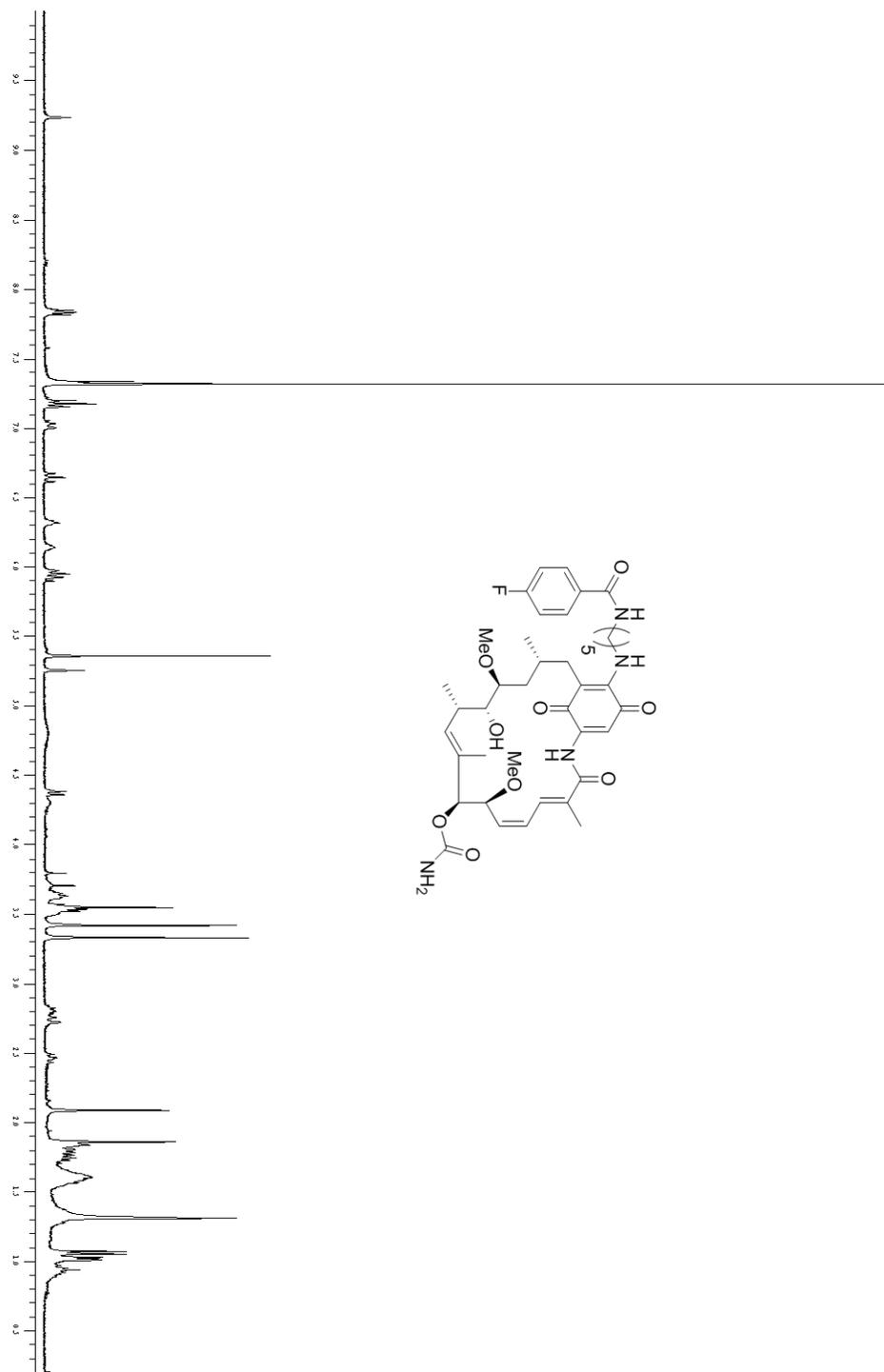
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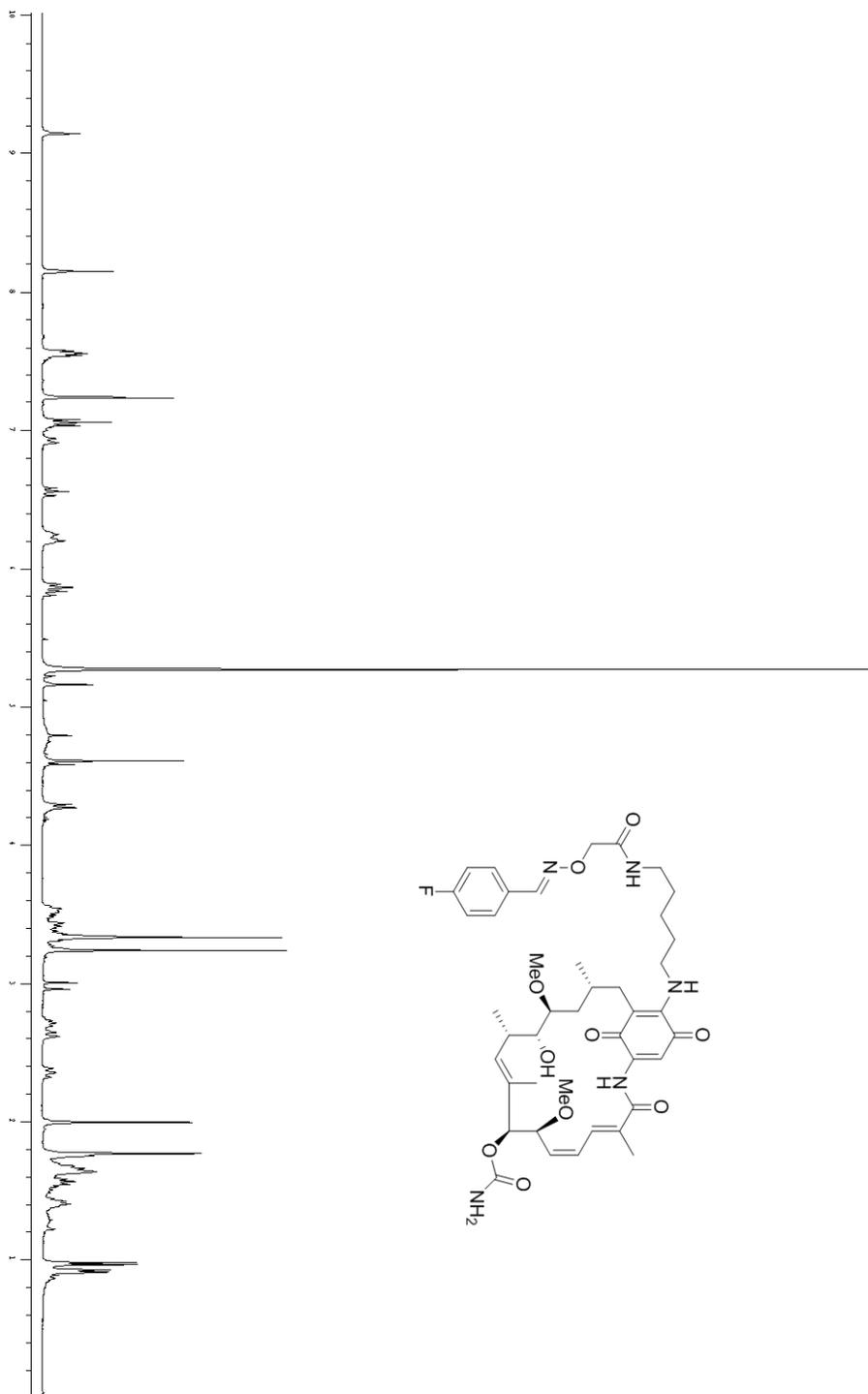
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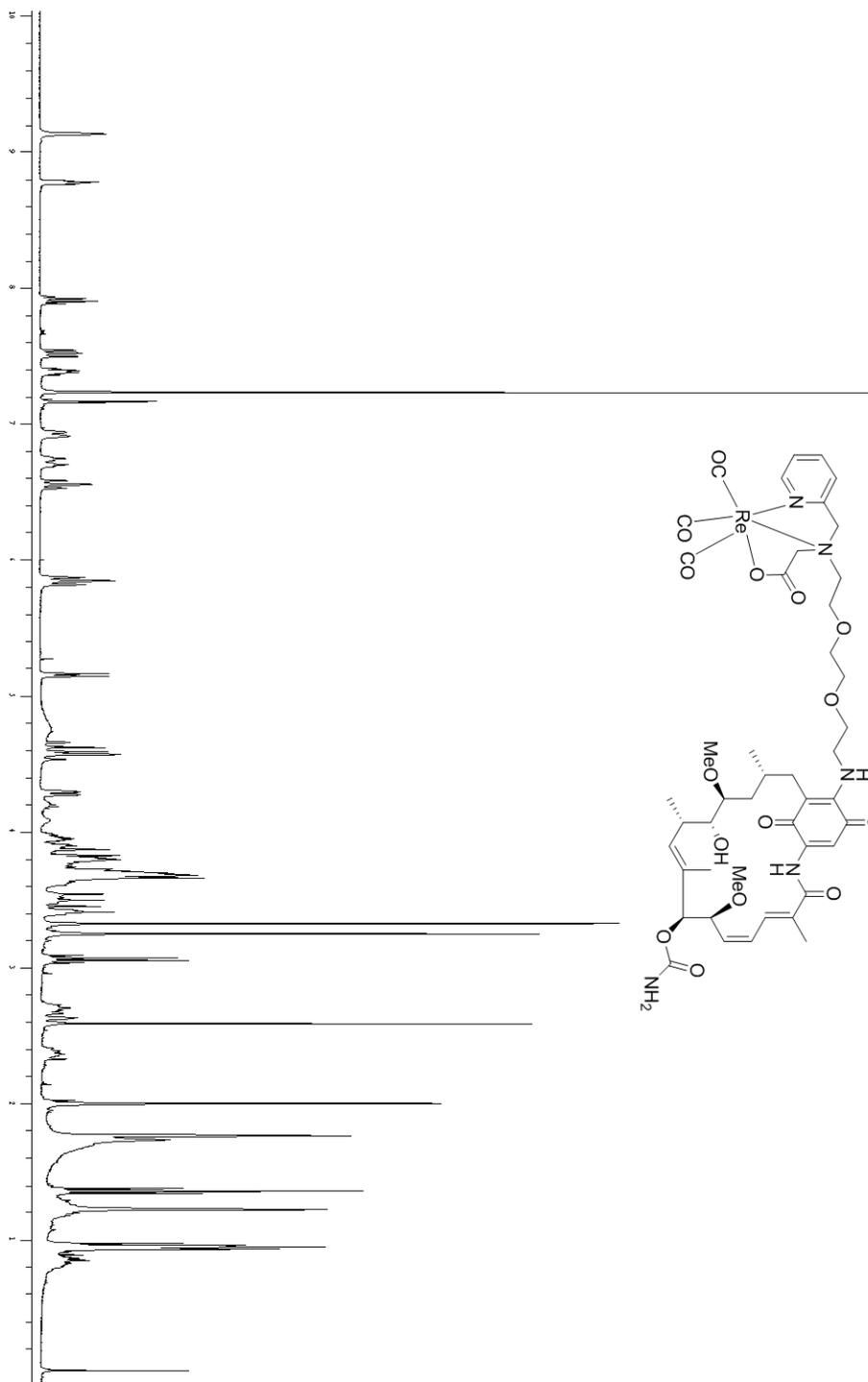
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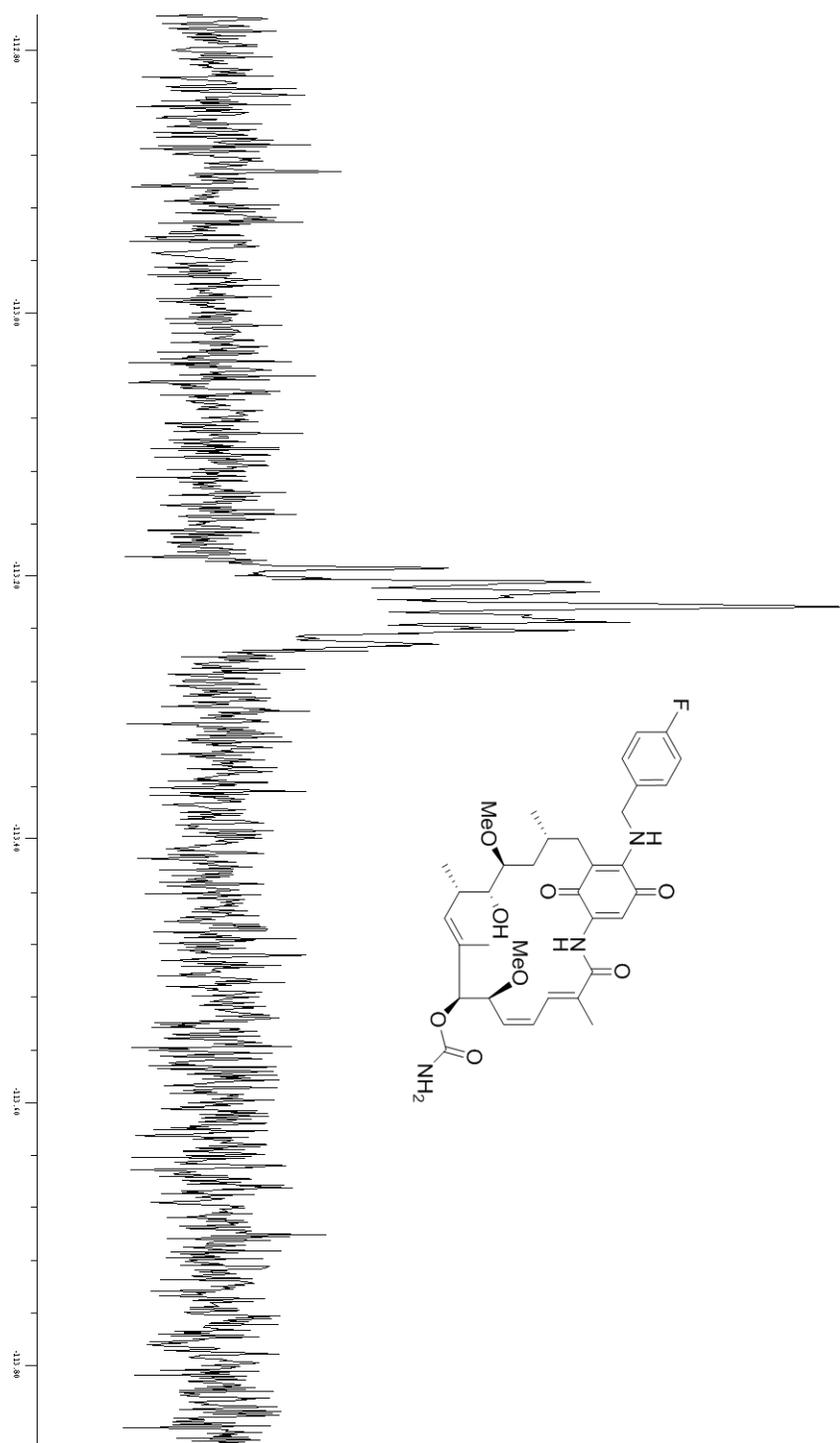
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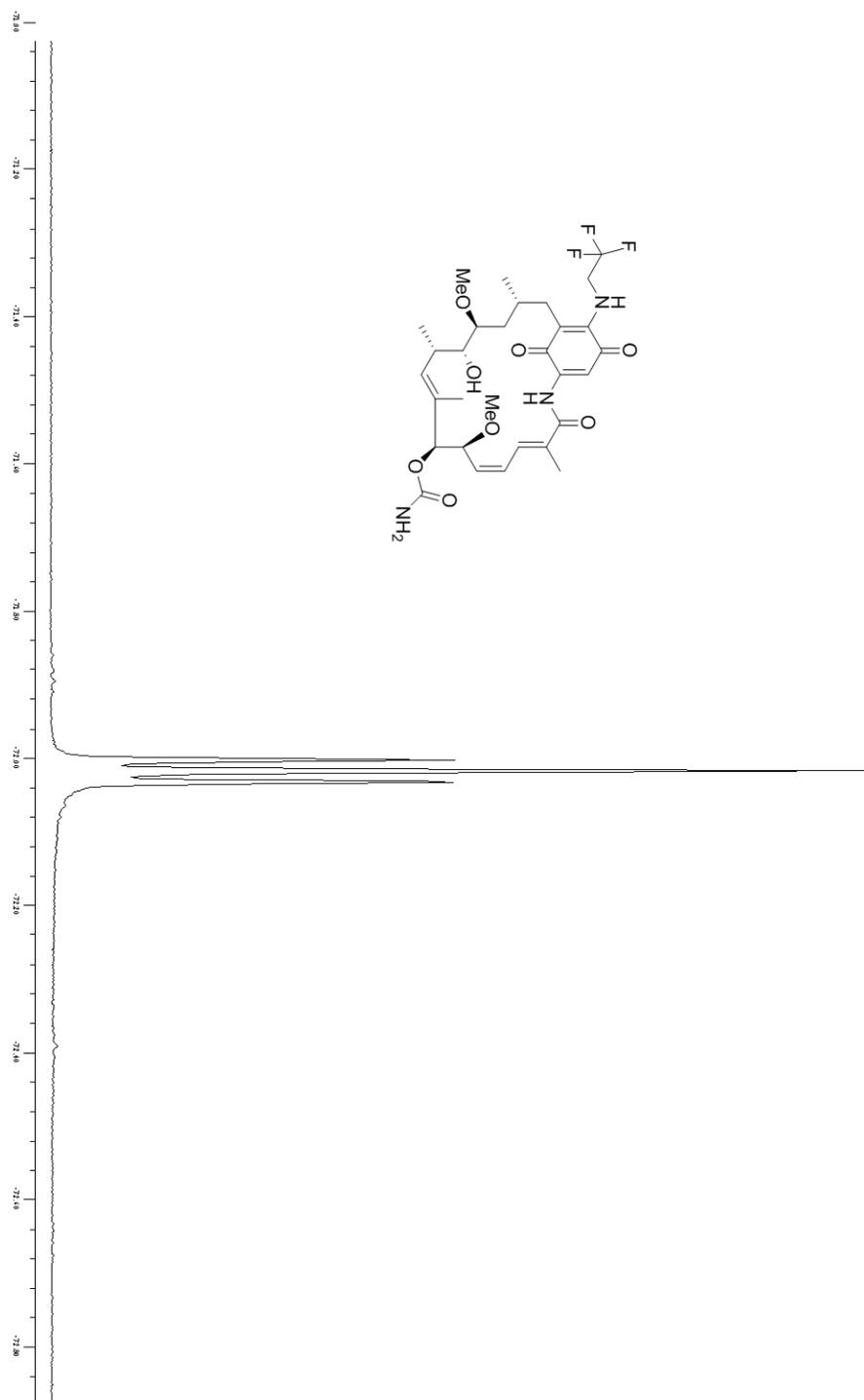
$^1\text{H-NMR}$: Tricarbonyl-{17-({2-[2-(2-Amino-ethoxy)-ethoxy]-ethyl}-pyridin-2-yl-methyl-amino)-acetic acid-17-demethoxy-geldanamycin}rhenium(I) 15



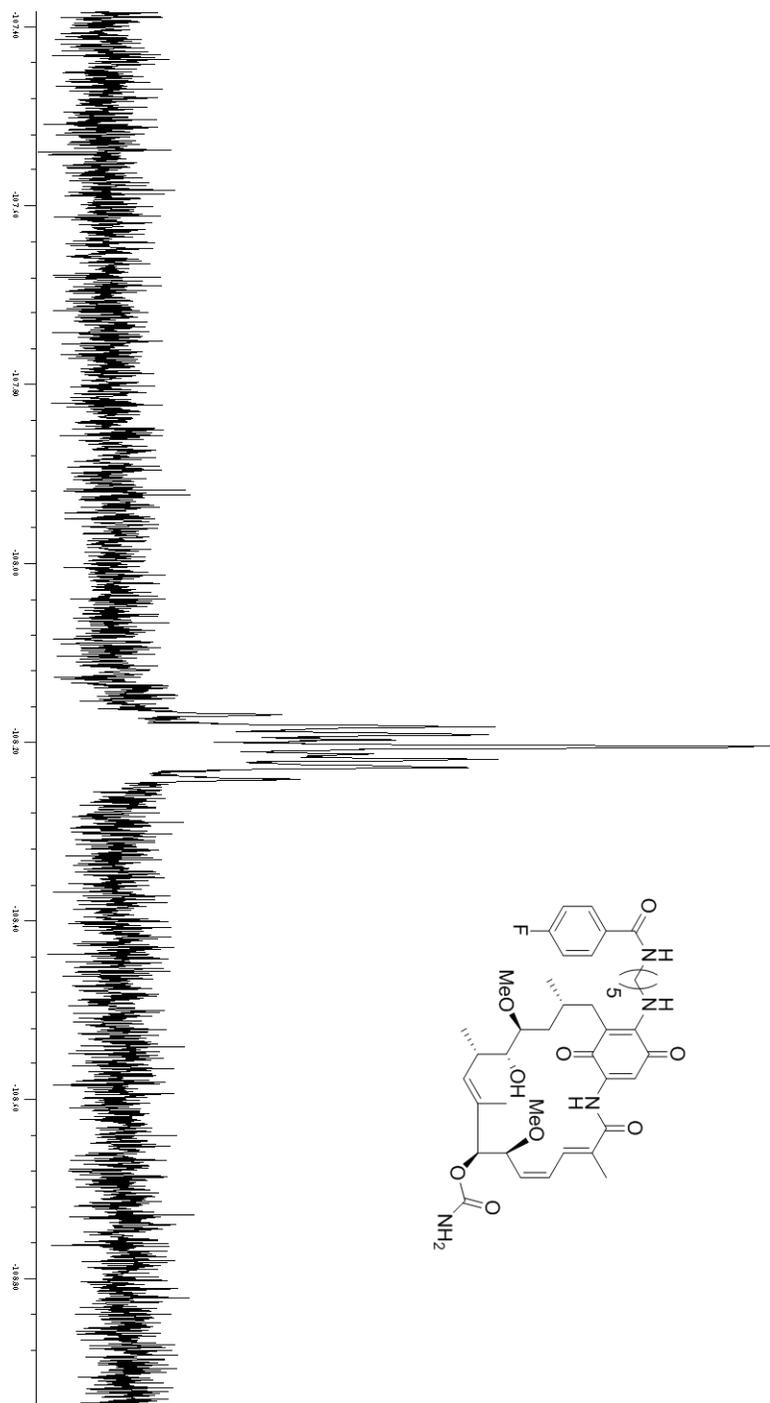
¹⁹F-NMR: 17-(4-Fluorobenzylamino)-17-demethoxy-geldanamycin 2



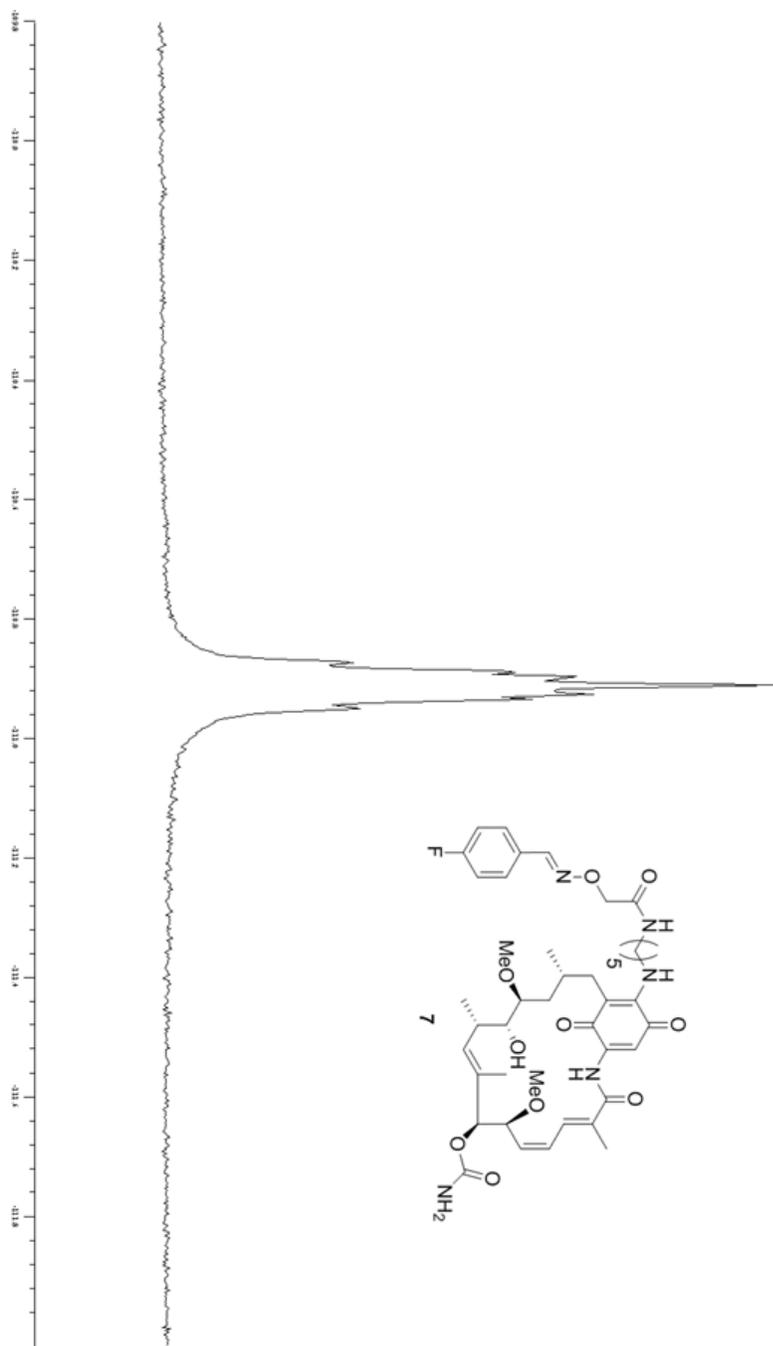
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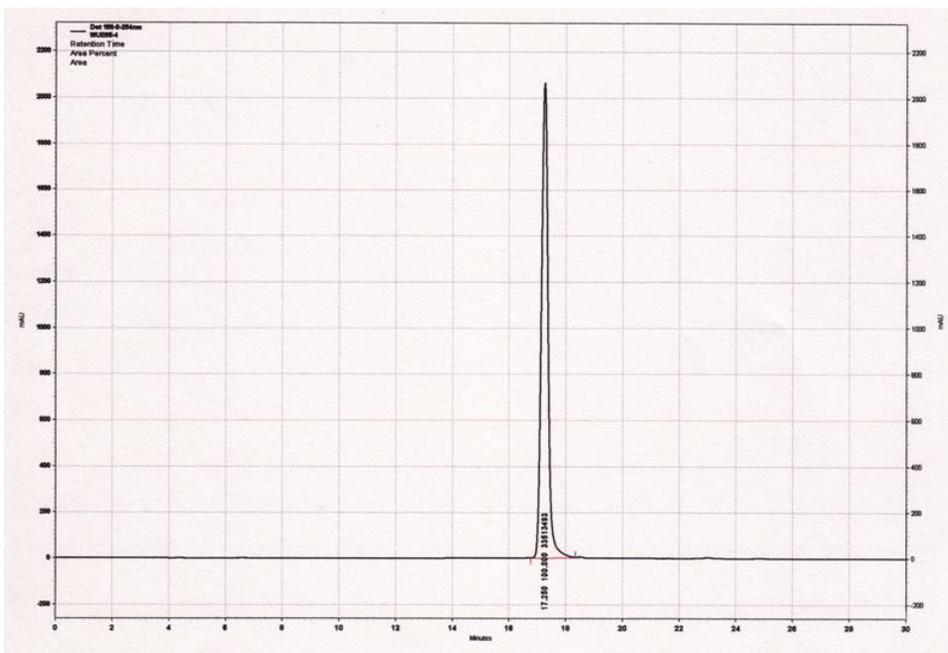
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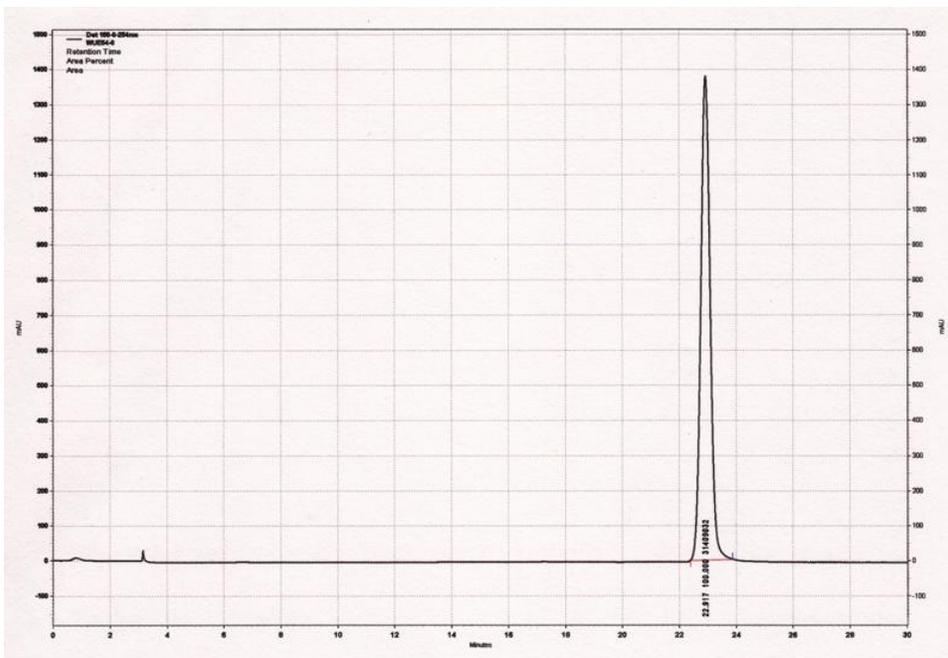
**¹⁹F-NMR: 17-(2-(((4-fluorobenzylidene)amino)oxy)acetamido)pentyl)-amino)-
17-demethoxy-geldanamycin 7**



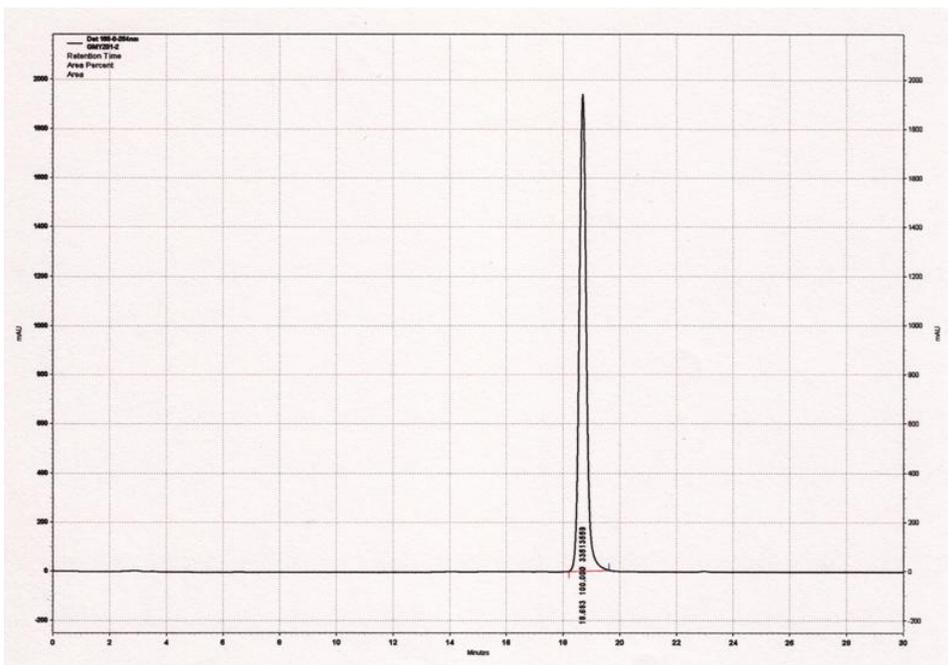
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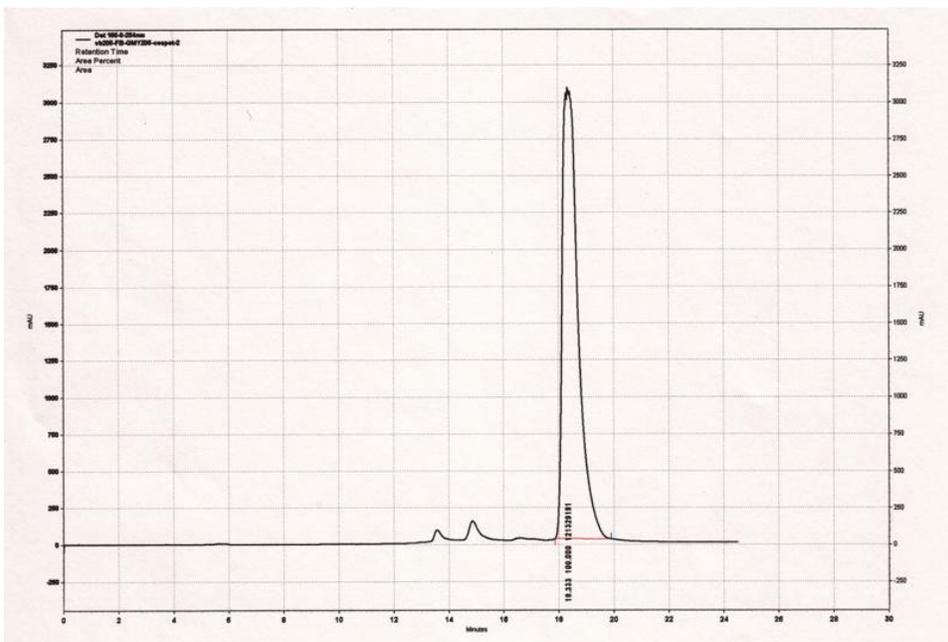
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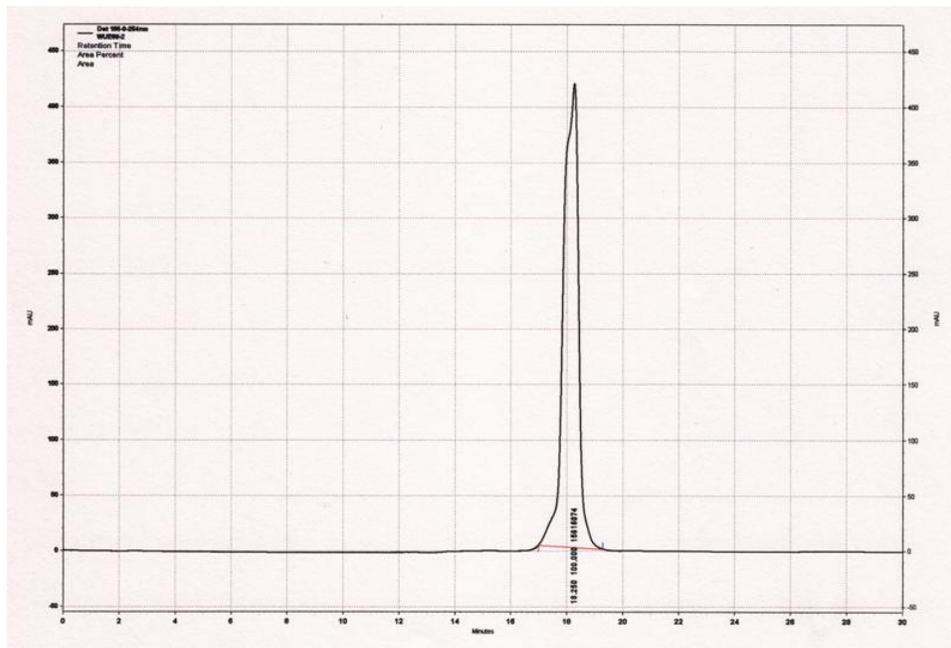
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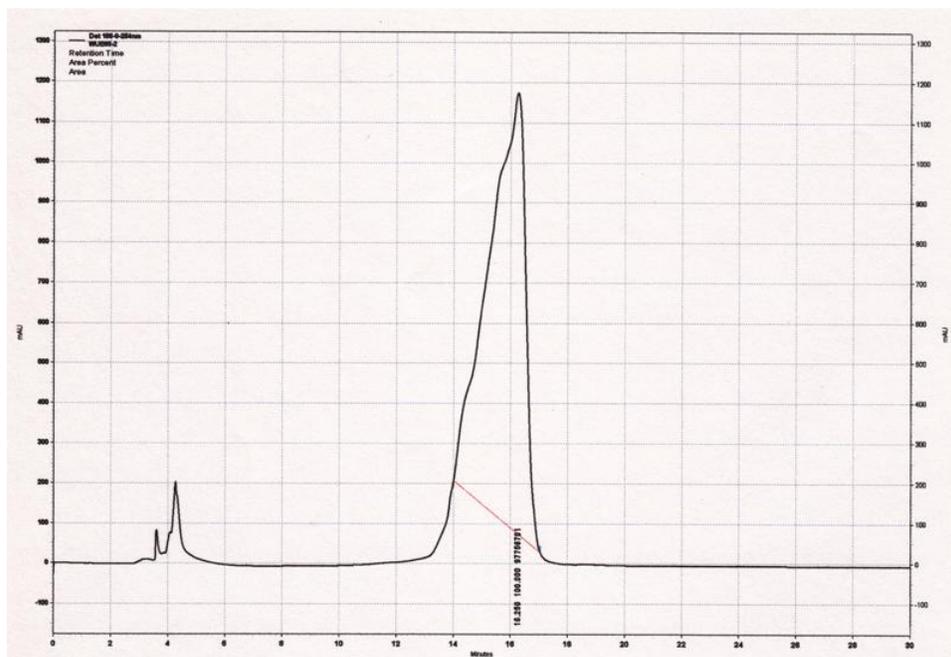
HPLC: 17-(4-Fluorobenzamido)pentylamino)-17-demethoxy-geldanamycin 5



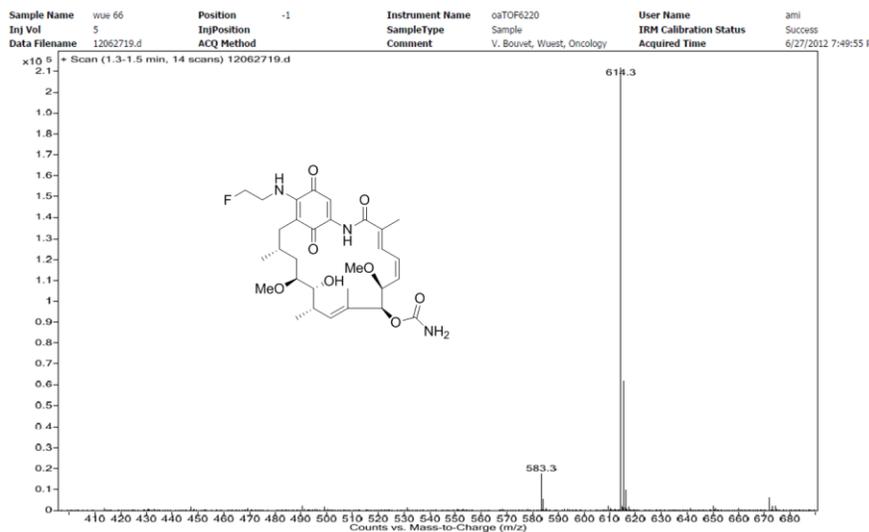
HPLC: 17-(2-(((4-fluorobenzylidene)amino)oxy)acetamido)pentyl)-amino)-17-demethoxy-geldanamycin 7



HPLC: Tricarbonyl-{17-({2-[2-(2-amino-ethoxy)-ethoxy]-ethyl}-pyridine-2-yl-methyl-amino)-acetic acid-17-demethoxy-geld-anamycin}rhenium(I) 15



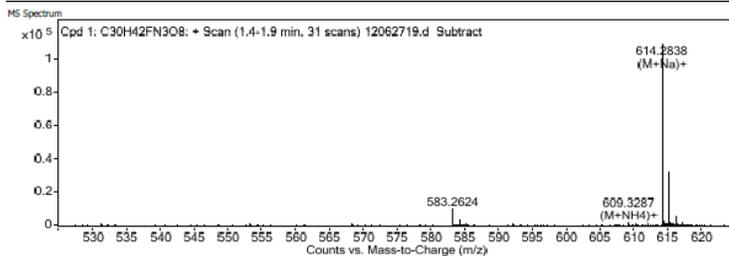
MS: 17-(2-Fluoroethylamino)-17-demethoxy-geldanamycin 1



Qualitative Compound Report

| | | | |
|------------|----------------------------|-----------------|-------------------|
| Comment | V. Bouvet, Wuest, Oncology | Sample Name | wue 66 |
| Data File | 12062719.d | Instrument Name | oaTOF6220 |
| Position | -1 | Operator | ami |
| Acq Method | | DA Method | da ami low mass.m |

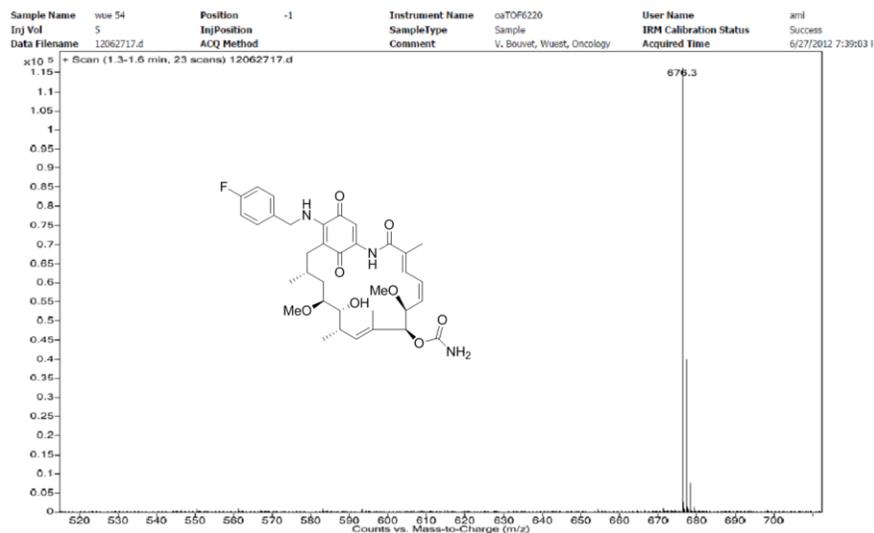
Compound Table



| m/z | Calc m/z | Diff (ppm) | z | Abund | Formula | Ion |
|----------|----------|------------|---|--------|--|-----------------------------------|
| 609.3287 | 609.3294 | -1.22 | 1 | 1080 | C ₃₀ H ₄₆ F N ₃ O ₈ | [M+NH ₄] ⁺ |
| 614.2838 | 614.2848 | -1.71 | 1 | 108903 | C ₃₀ H ₄₂ F N ₃ Na O ₈ | [M+Na] ⁺ |

--- End Of Report ---

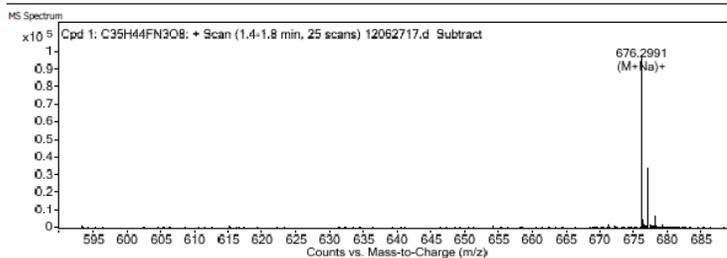
MS: 17-(4-Fluorobenzylamino)-17-demethoxy-geldanamycin 2



Qualitative Compound Report

| | | | |
|------------|----------------------------|-----------------|-------------------|
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| Position | -1 | Operator | ami |
| Acq Method | | DA Method | da ami low mass.m |

Compound Table

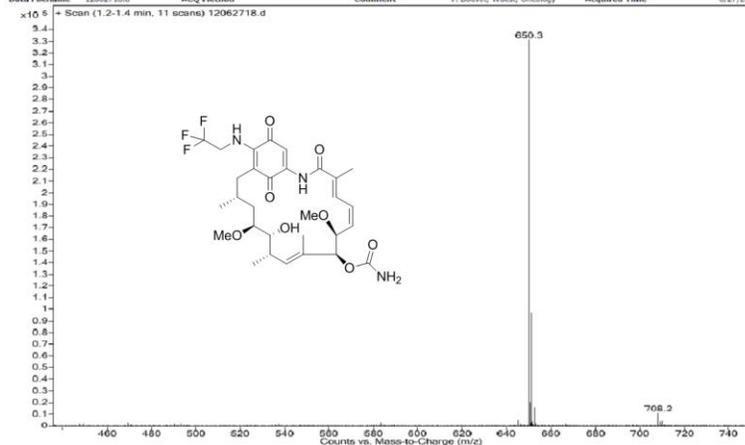


| m/z | Calc m/z | Diff(ppm) | Abund | Formula | Ion |
|----------|----------|-----------|-------|--|---------|
| 676.2991 | 676.3005 | -1.95 | 97722 | C ₃₅ H ₄₄ F N ₃ Na O ₈ | (M+Na)+ |

--- End Of Report ---

MS: 17-(2,2,2-Trifluoroethylamino)-17-demethoxy-geldanamycin 3

Sample Name gmyz 1 Position -1 Instrument Name oaTOF6220 User Name ami
 Inj Vol 5 InjPosition -1 SampleType Sample IRM Calibration Status Success
 Data Filename 12062718.d ACQ Method Comment V. Bouvet, Wuest, Oncology Acquired Time 6/27/2012 7:45:11 f

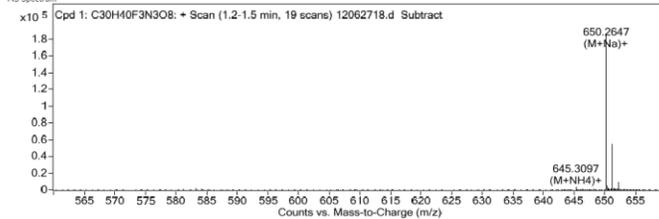


Qualitative Compound Report

Comment V. Bouvet, Wuest, Oncology Sample Name gmyz 1
 Data File 12062718.d Instrument Name oaTOF6220
 Position -1 Operator ami
 Acq Method DA Method da ami low mass.m

Compound Table

MS Spectrum



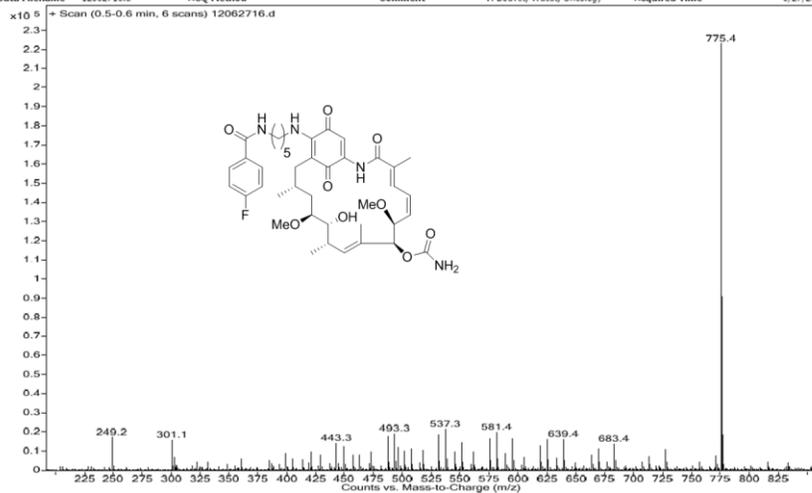
MS Spectrum Peak List

| m/z | Calc. m/z | Diff(ppm) | Abund | Formula | Ion |
|----------|-----------|-----------|--------|--|-----------------------------------|
| 645.3097 | 645.3106 | -1.35 | 2539 | C ₃₀ H ₄₄ F ₃ N ₄ O ₈ | (M+NH ₄) ⁺ |
| 650.2647 | 650.266 | -2.01 | 189935 | C ₃₀ H ₄₀ F ₃ N ₃ NaO ₈ | (M+Na) ⁺ |

--- End Of Report ---

MS: 17-(4-Fluorobenzamido)pentyl)-17-demethoxy-geldanamycin 5

Sample Name gmbv 193 Position -1 Instrument Name osTOF6220 User Name ami
 Inj Vol 5 InjPosition -1 SampleType Sample IRM Calibration Status Success
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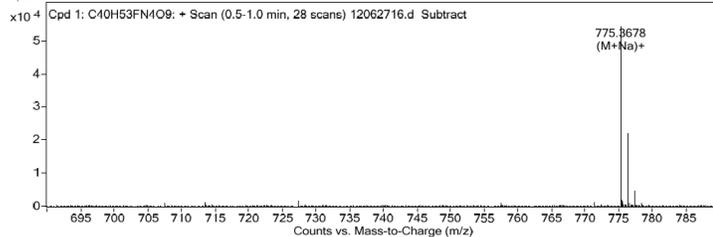


Qualitative Compound Report

Comment V. Bouvet, Wuest, Oncology Sample Name gmbv 193
 Data File 12062716.d Instrument Name osTOF6220
 Position -1 Operator ami
 Acq Method DA Method da ami low mass.m

Compound Table

MS Spectrum

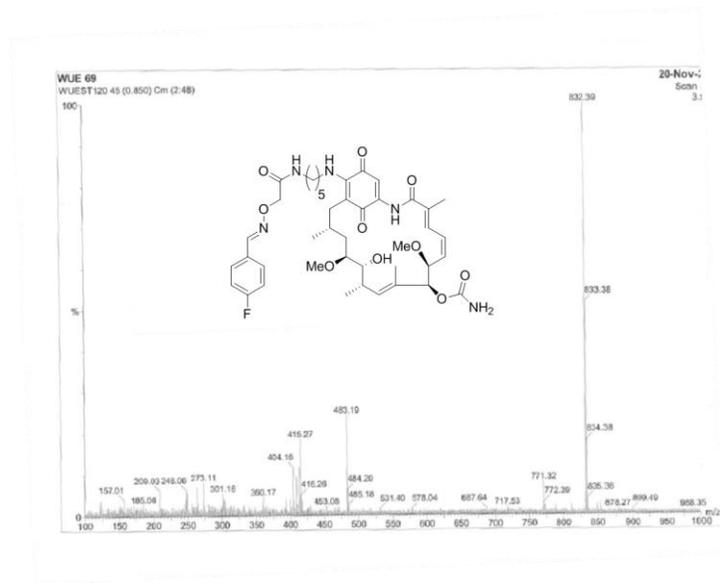


MS Spectrum Peak List

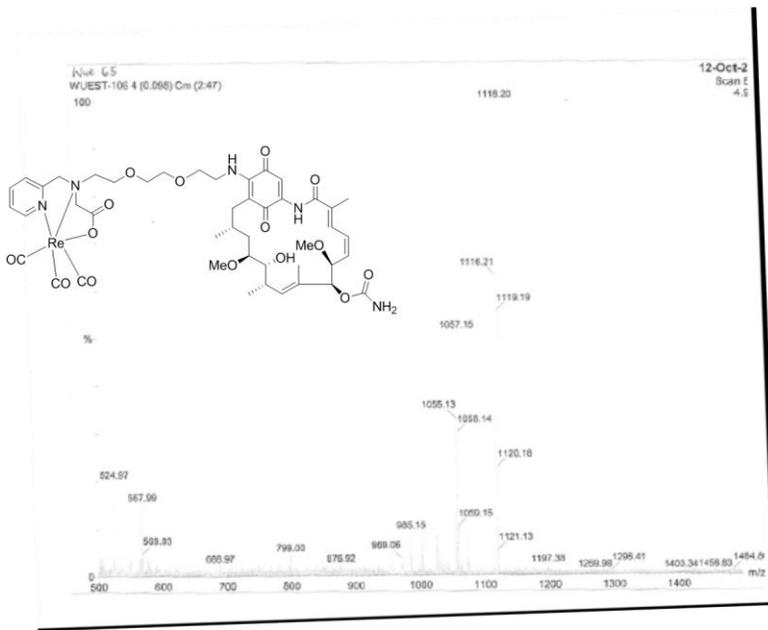
| m/z | Calc m/z | Diff(ppm) | Abund | Formula | Ion |
|----------|----------|-----------|-------|--|---------|
| 775.3678 | 775.3689 | -1.43 | 54276 | C ₄₀ H ₅₃ F N ₄ Na O ₉ | (M+Na)+ |

--- End of Report ---

MS: 17-(2-(((4-fluorobenzylidene)amino)oxy)acetamido)pentyl)-amino)-17-demethoxy-geldanamycin 7



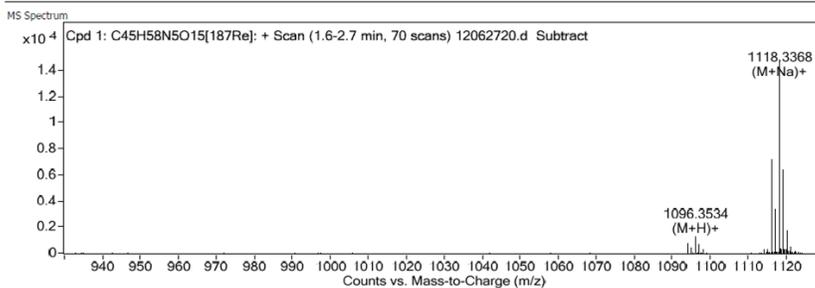
MS: Tricarbonyl-{17-({2-[2-(2-Amino-ethoxy)-ethoxy]-ethyl}-pyridin-2-yl-methyl-amino)-acetic acid-17-demethoxy-geld-anamycin}rhenium(I) 15



Qualitative Compound Report

Comment V. Bouvet, Wuest, Oncology
Data File 12062720.d
Position -1
Acq Method
Sample Name wue 65
Instrument Name caTOF6220
Operator ami
DA Method da ami low mass.m

Compound Table



| m/z | Calc m/z | Diff(ppm) | z | Abund | Formula | Ion |
|-----------|-----------|-----------|---|-------|--|---------------------|
| 1096.3534 | 1096.356 | -2.35 | 1 | 1250 | C ₄₅ H ₅₉ N ₅ O ₁₅ [187Re] | (M+H) ⁺ |
| 1118.3368 | 1118.3379 | -0.98 | 1 | 14808 | C ₄₅ H ₅₈ N ₅ NaO ₁₅ [187Re] | (M+Na) ⁺ |

--- End Of Report ---