

Supplementary Information

Synthesis and evaluation of 14 β -acyl substituted 17-cyclopropylmethyl-7,8-dihydromorphinone derivatives: mixed partial agonists at mu opioid and nociception/orphanin FQ peptide receptors

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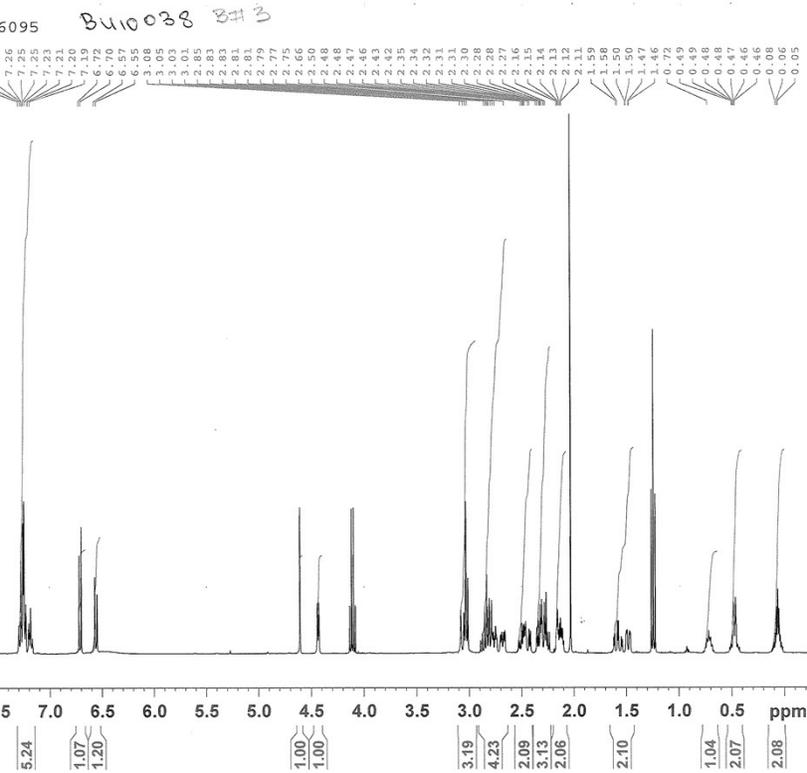
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S2 – S11: ¹H and ¹³C NMR of final compounds

S12: Figure showing structures of **11e** β -FNA in the MOP binding pocket

3a

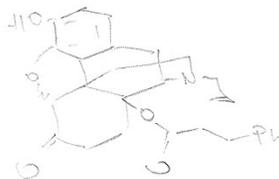


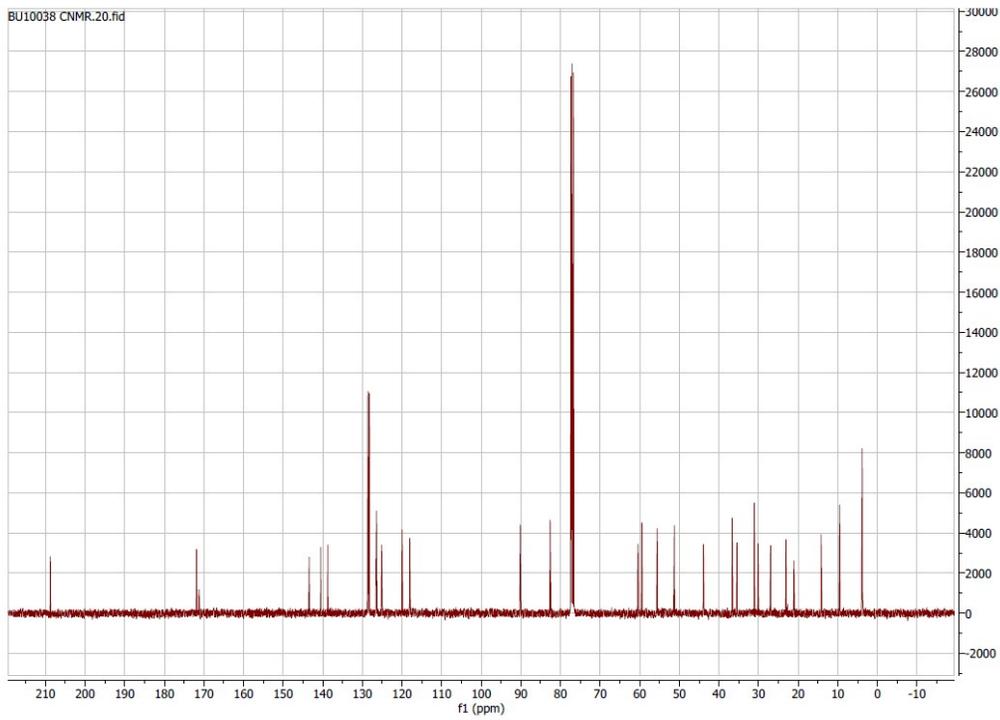
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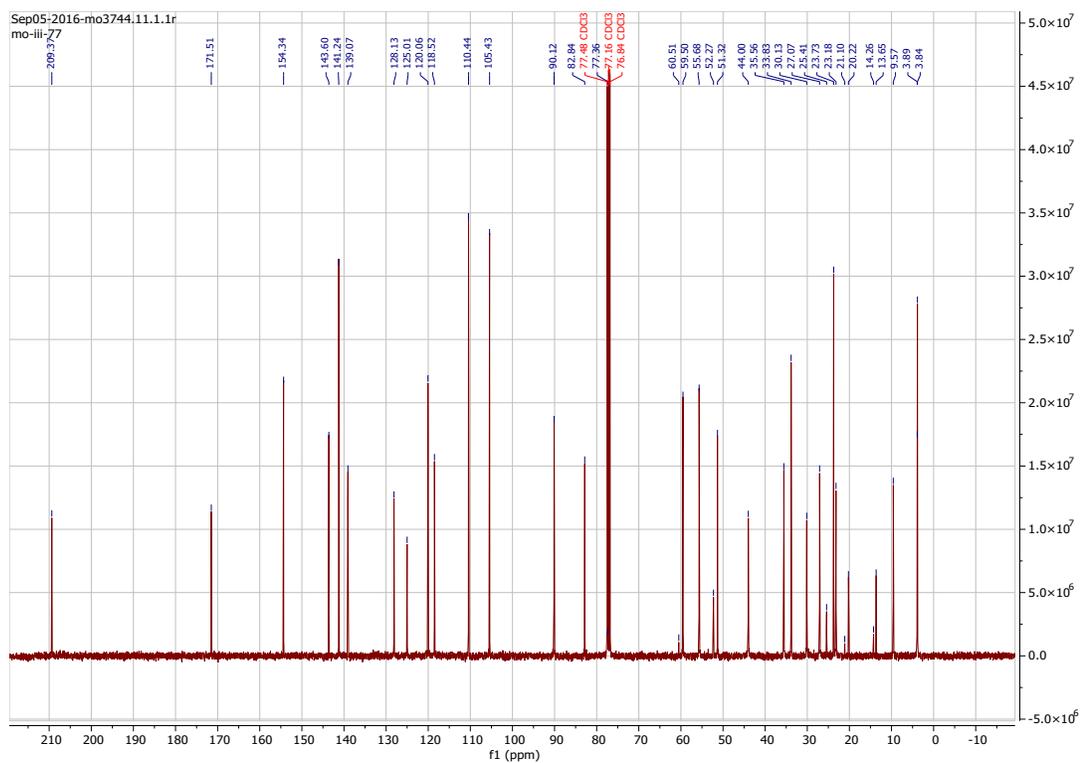
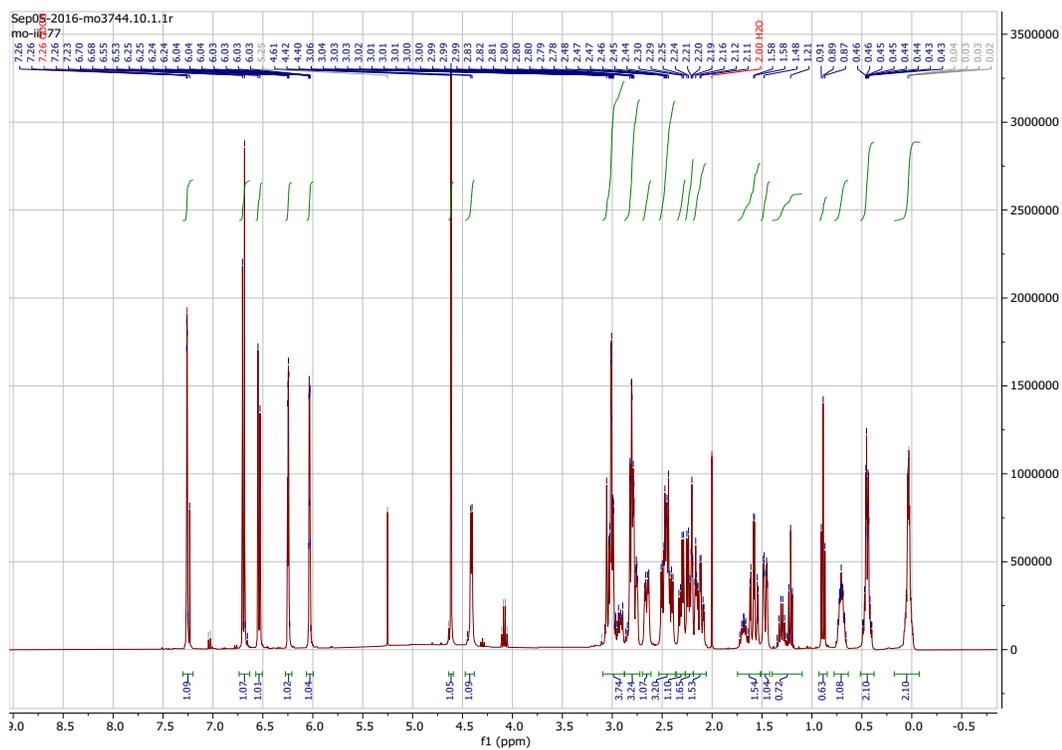
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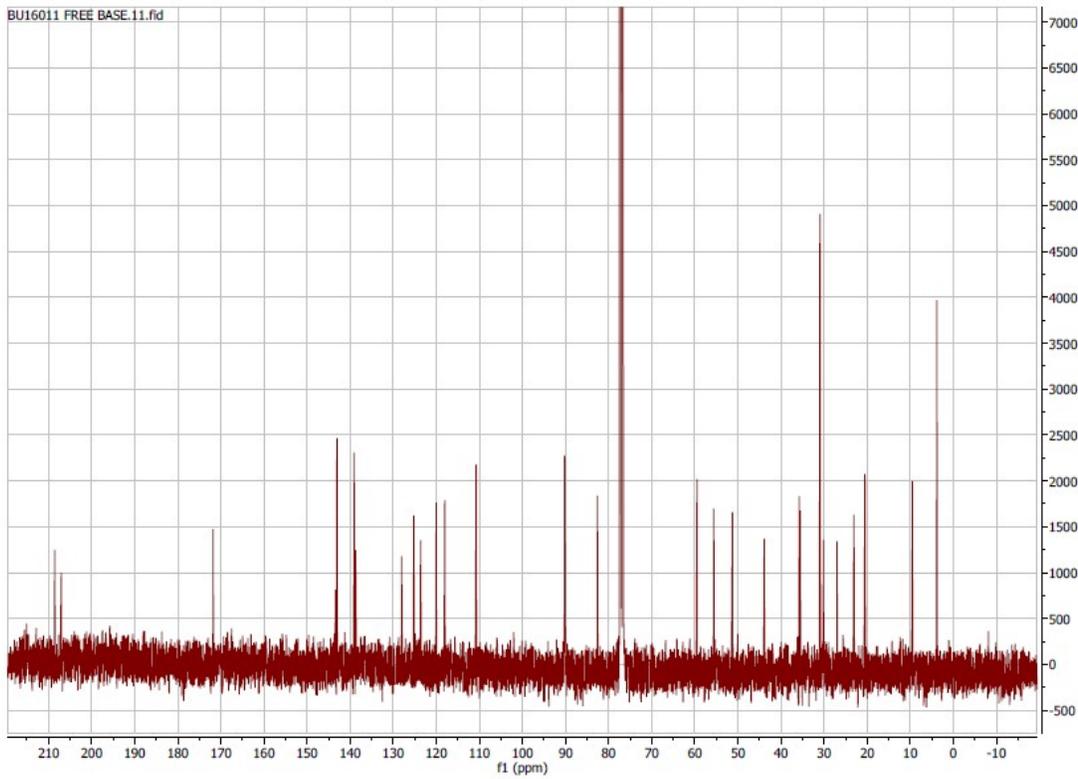
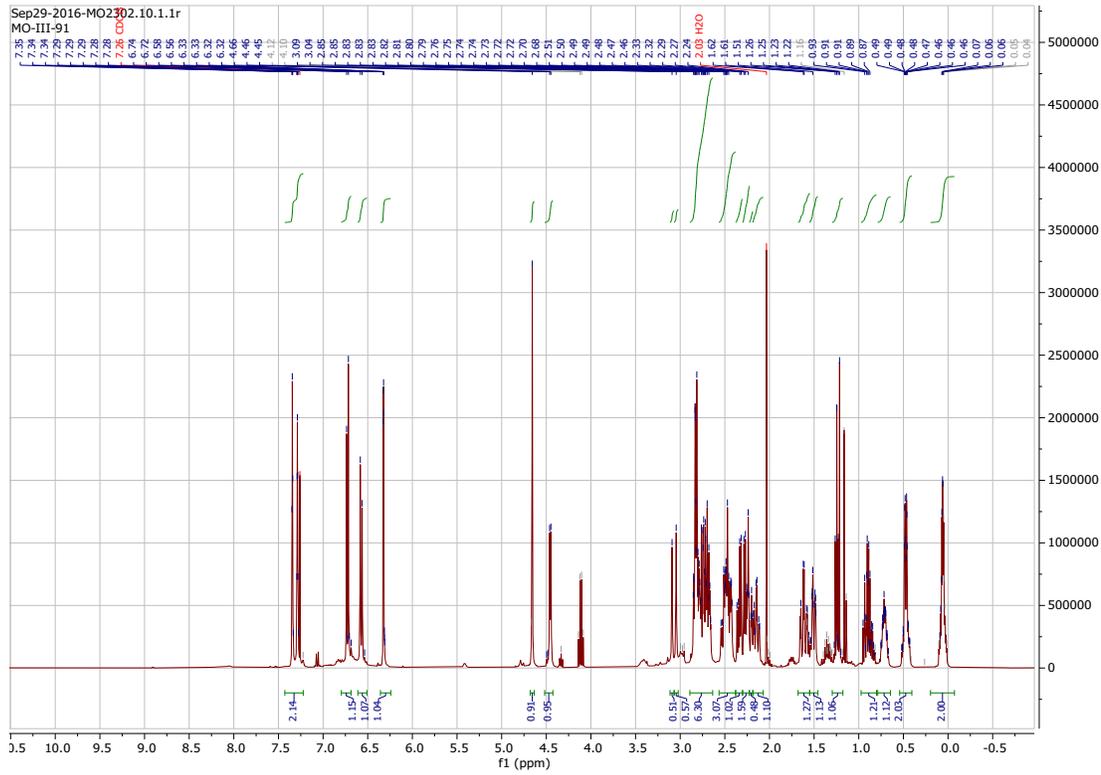


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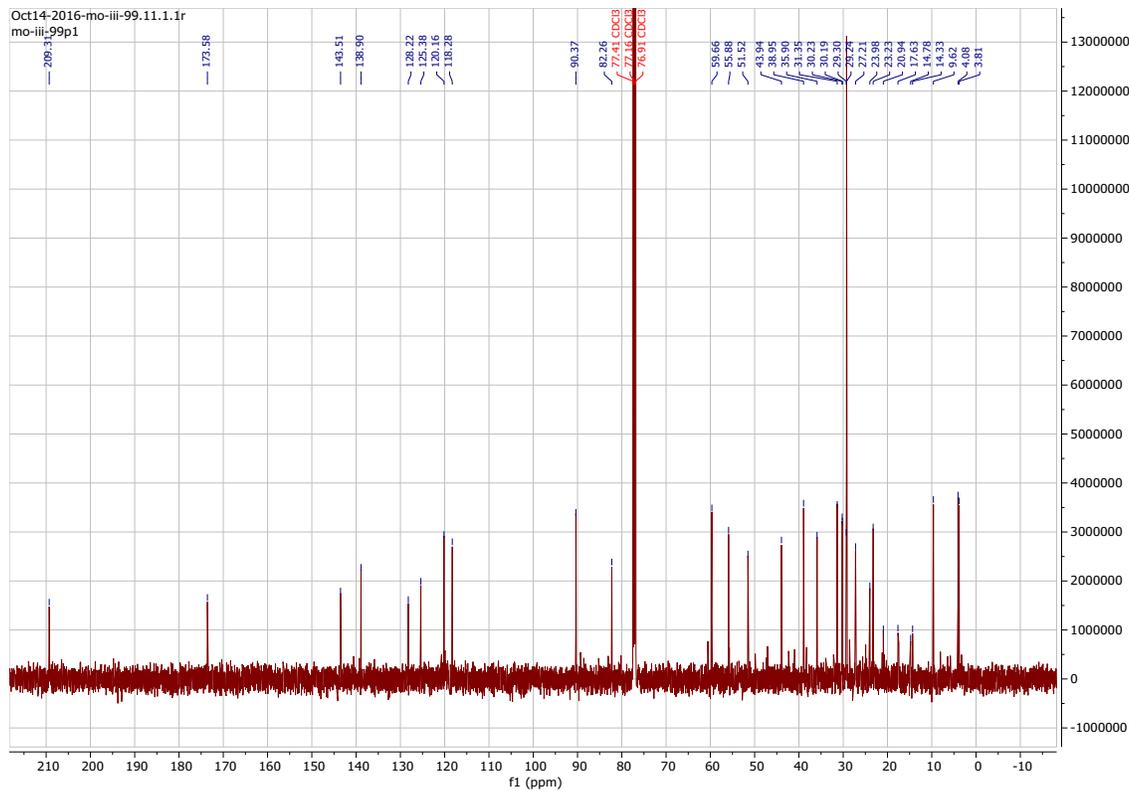
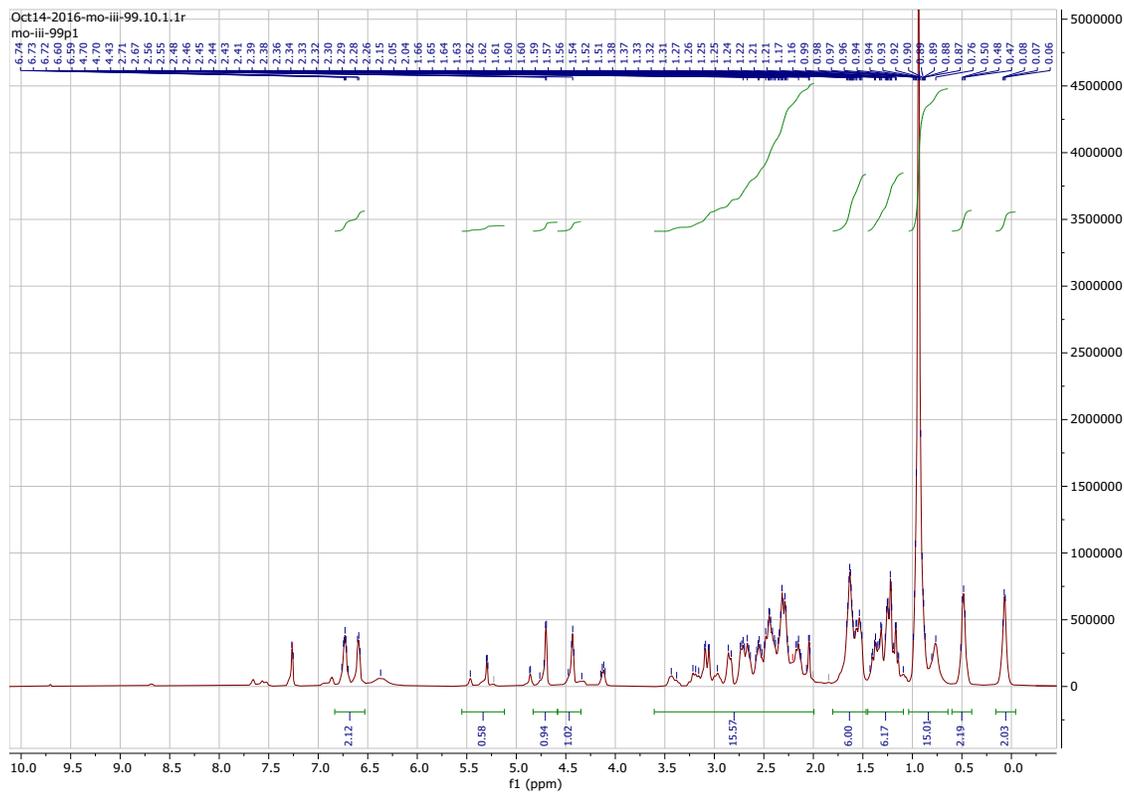
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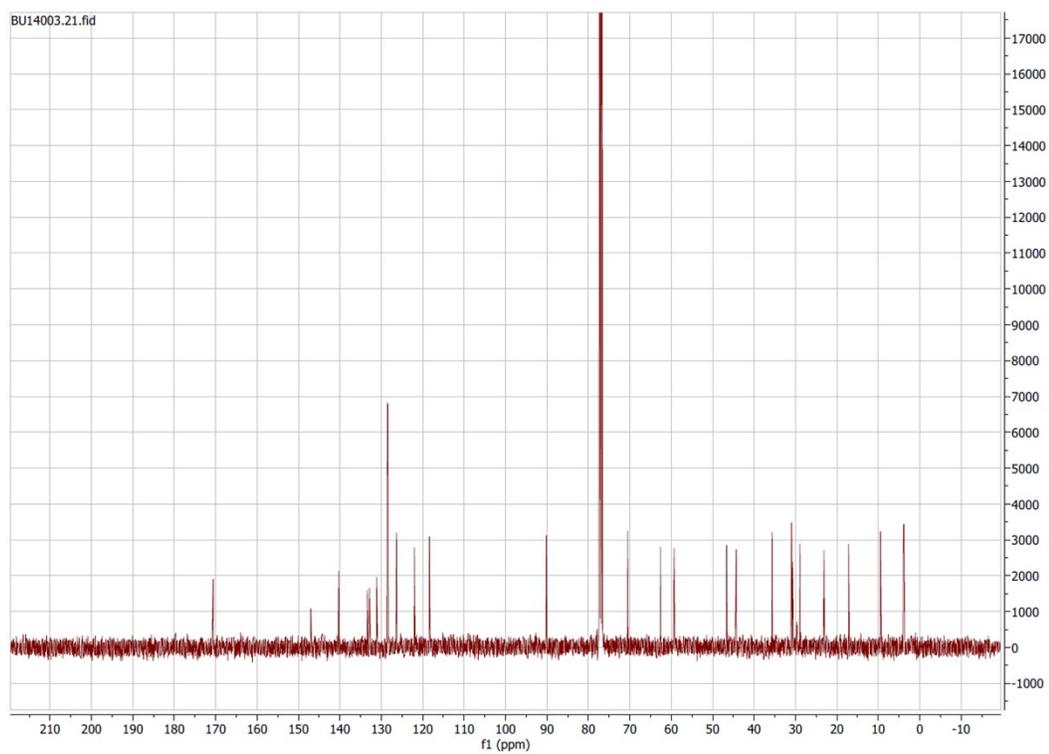
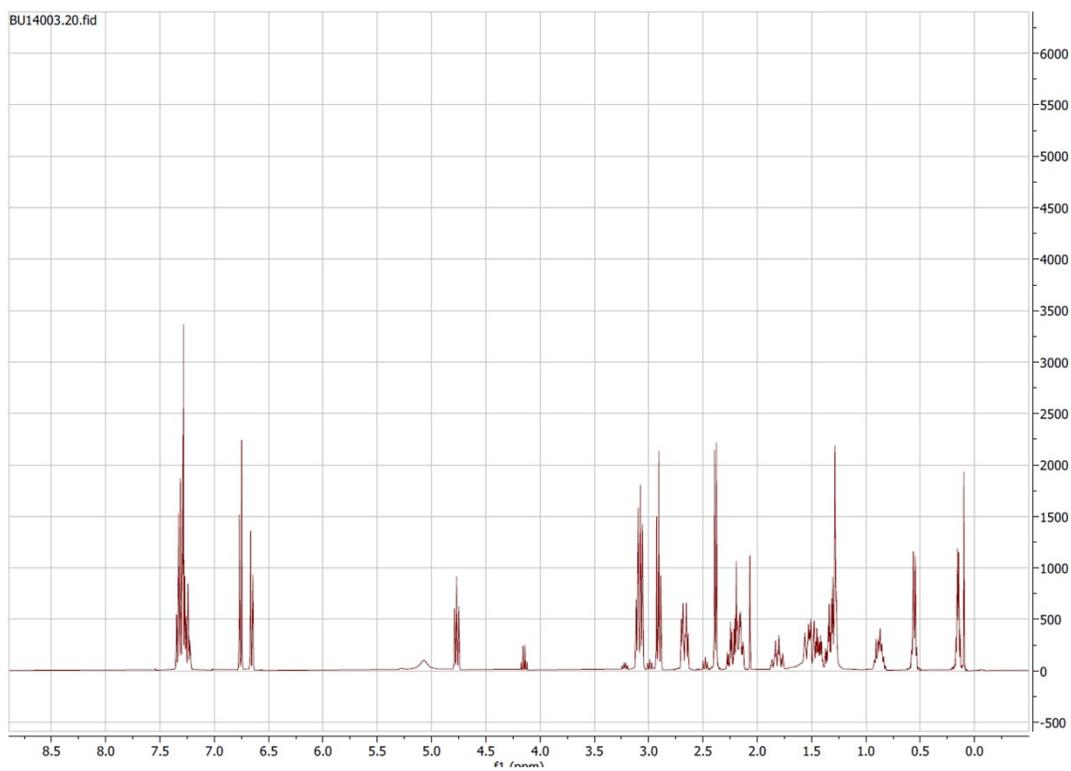
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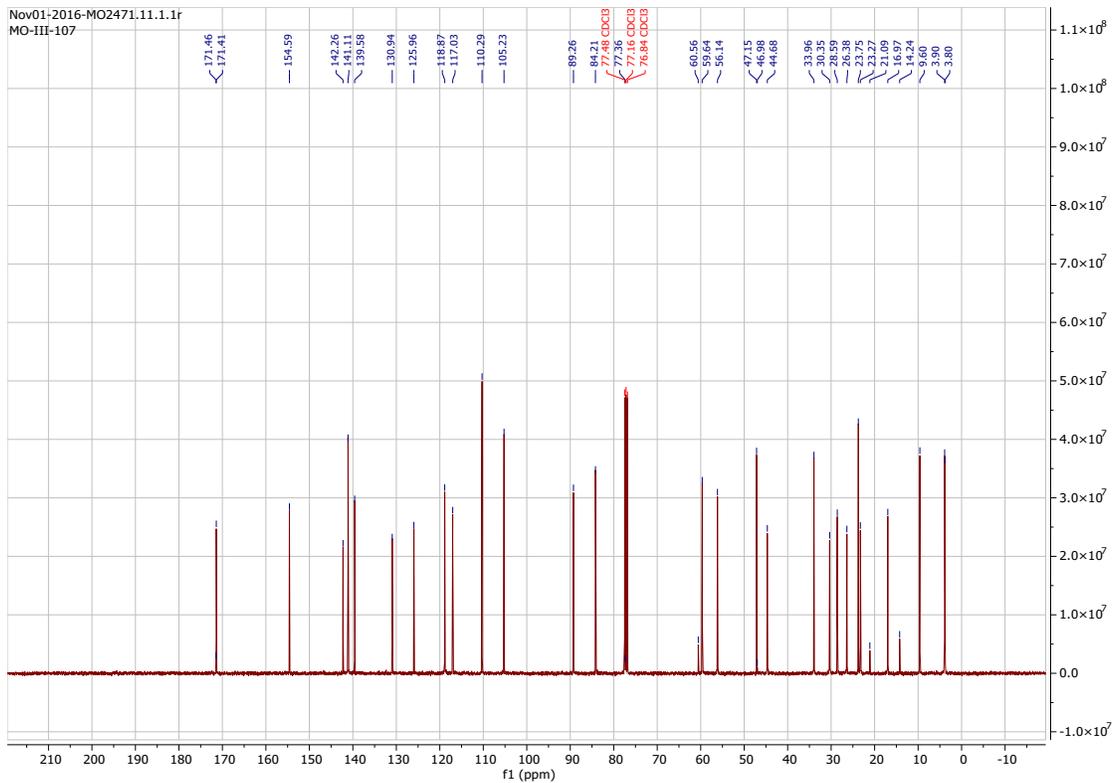
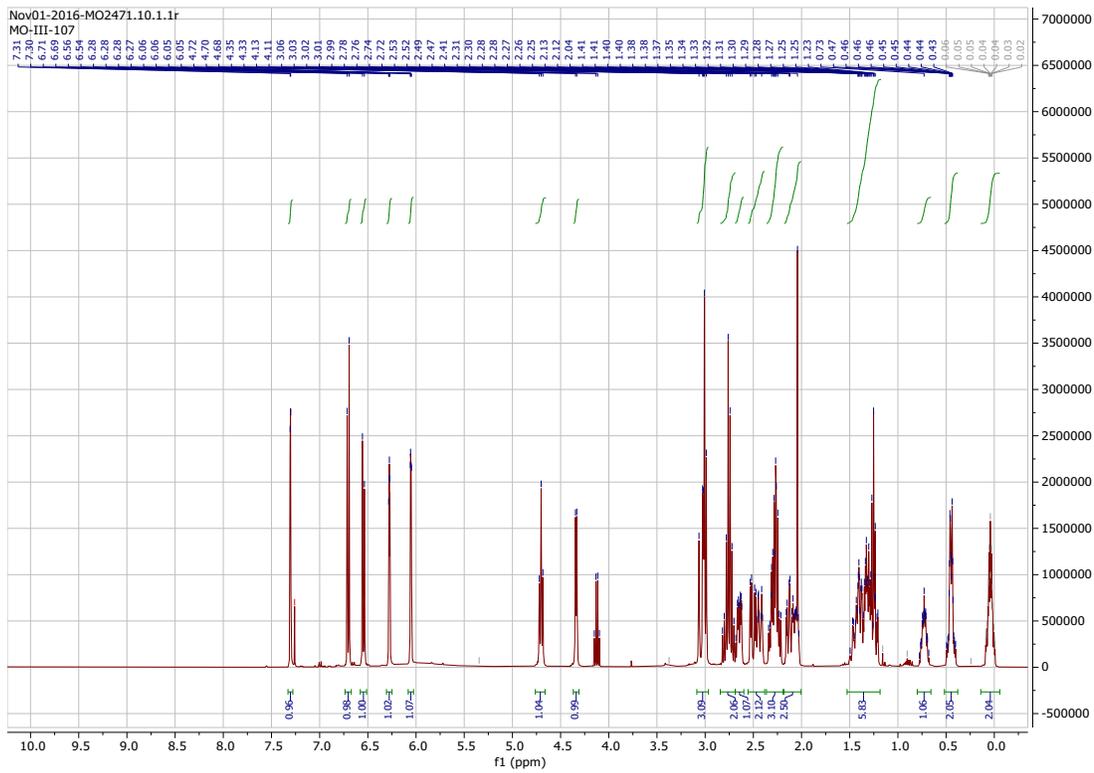
3e



11a



11b

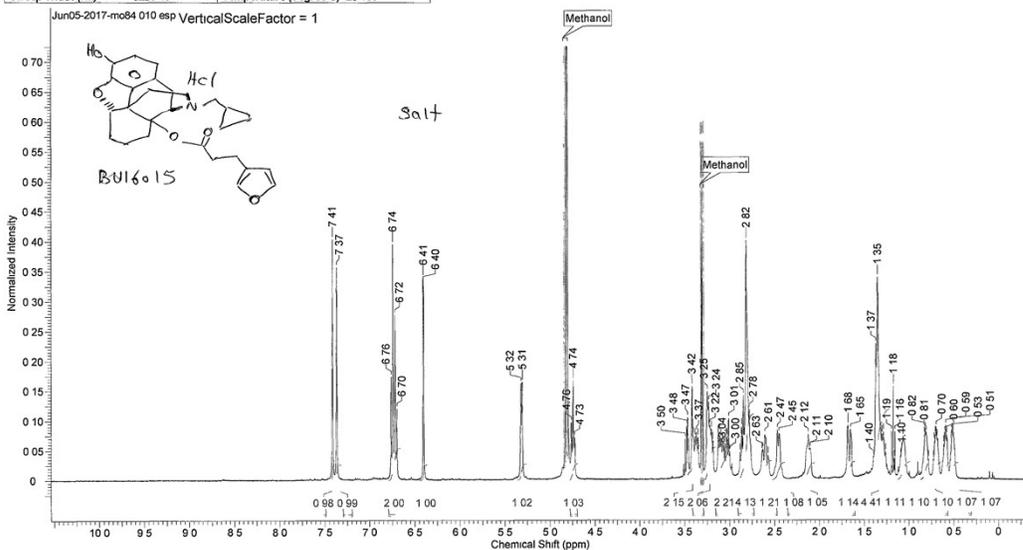


11c

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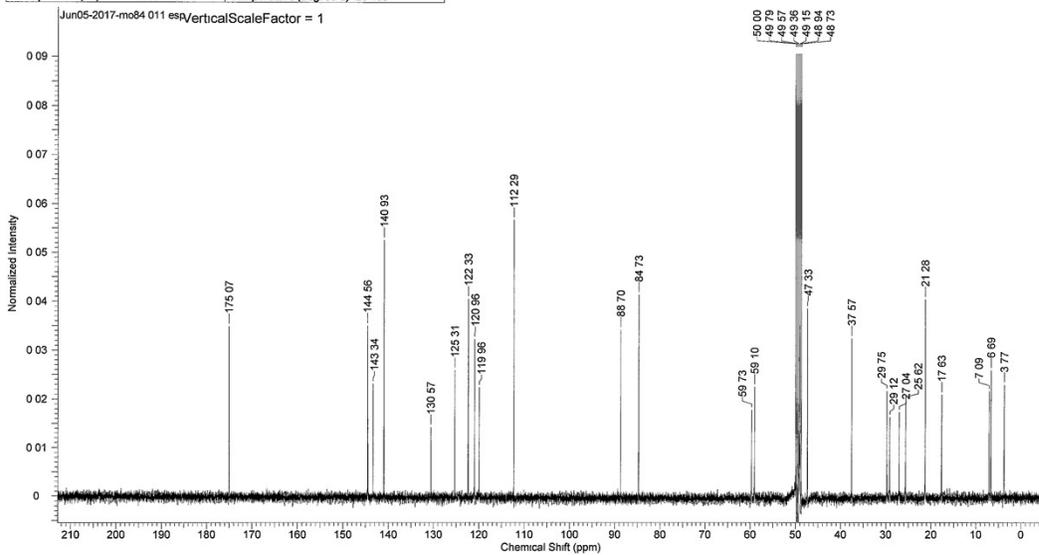
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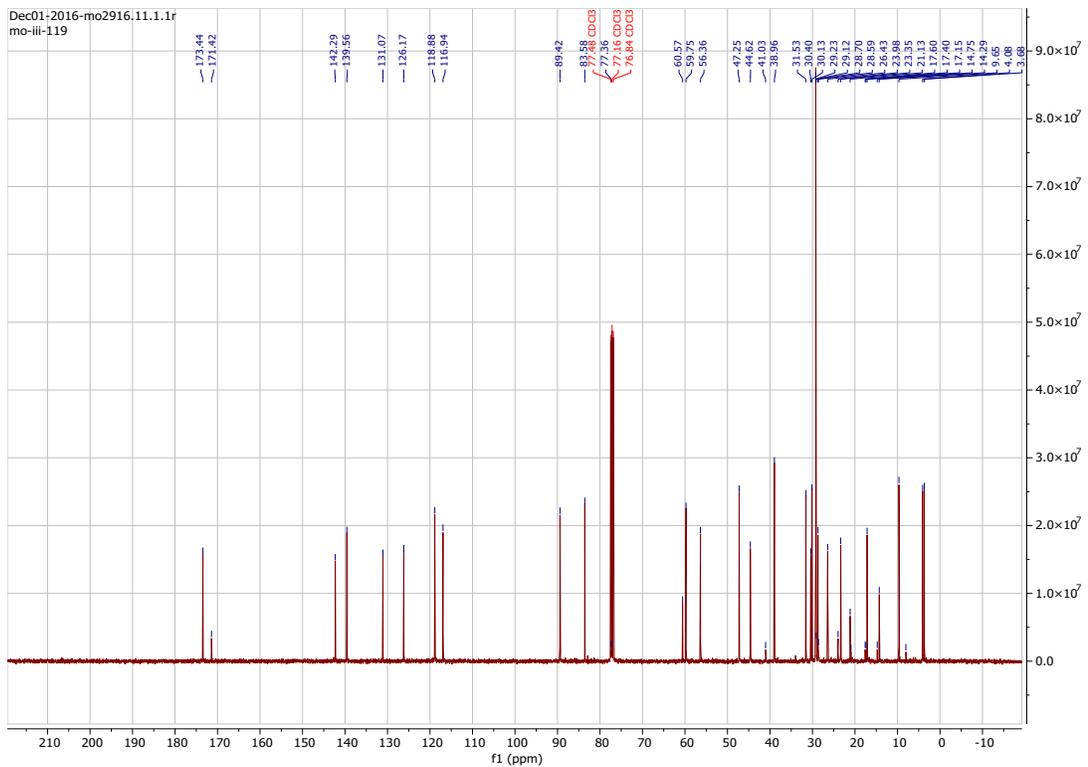
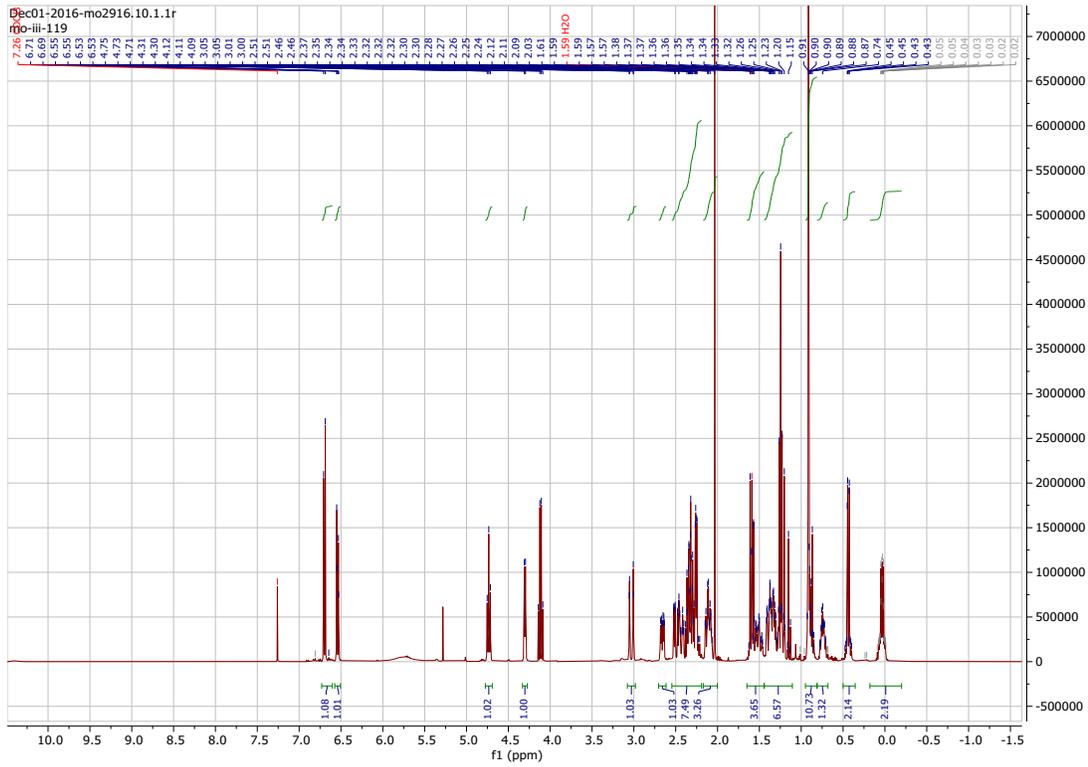
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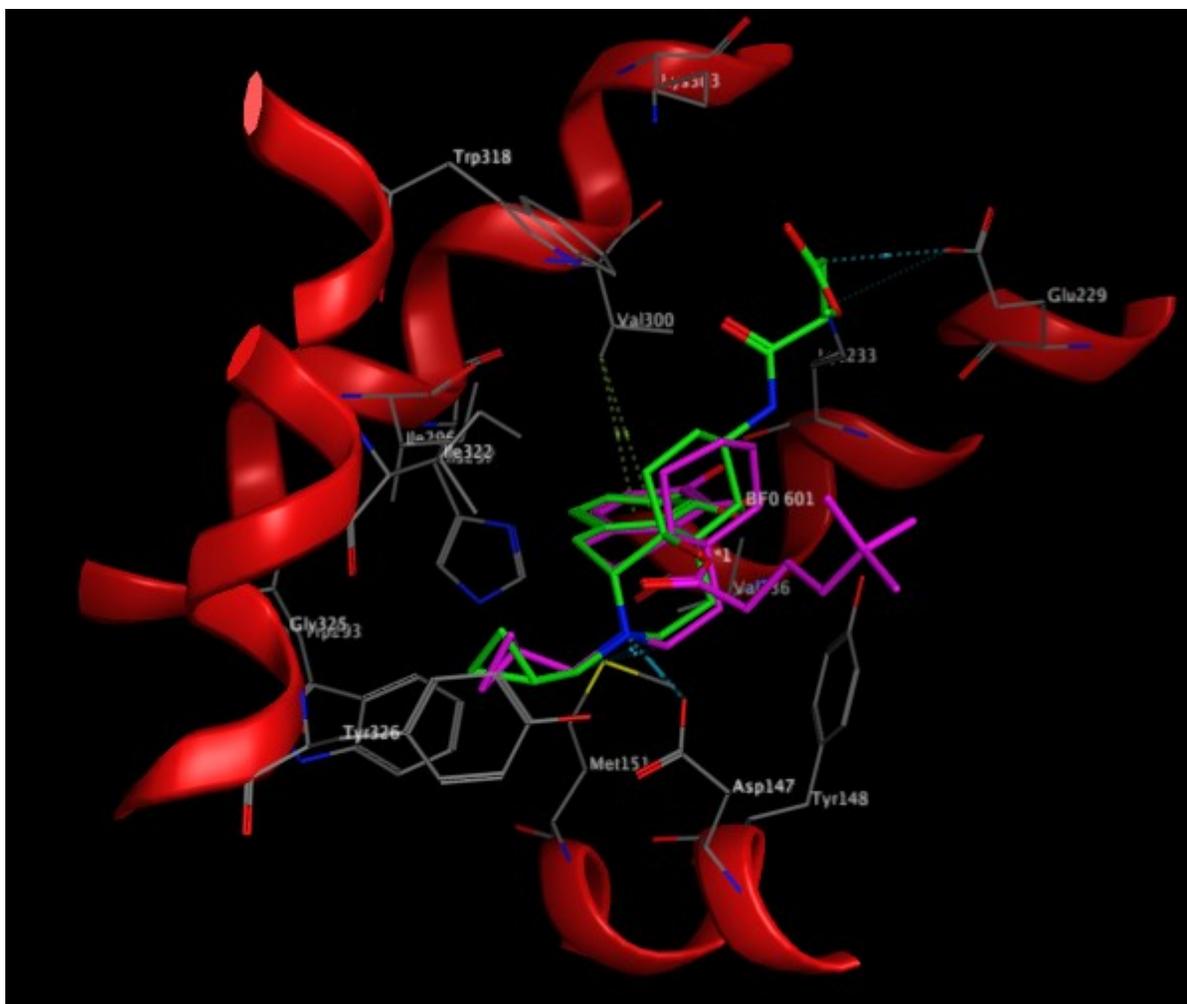
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11e



S11



Structures of 11e (purple) and the MOP co-crystallized ligand, β -FNA (green) in the MOP binding pocket