

Supporting information
Base Promoted Selective Synthesis of
2*H*-Pyranones and Tetrahydronaphthalenes *via* Domino Reactions

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Table of content

1. ^1H , ^{13}C NMR and HRMS spectras	<i>S2-S19</i>
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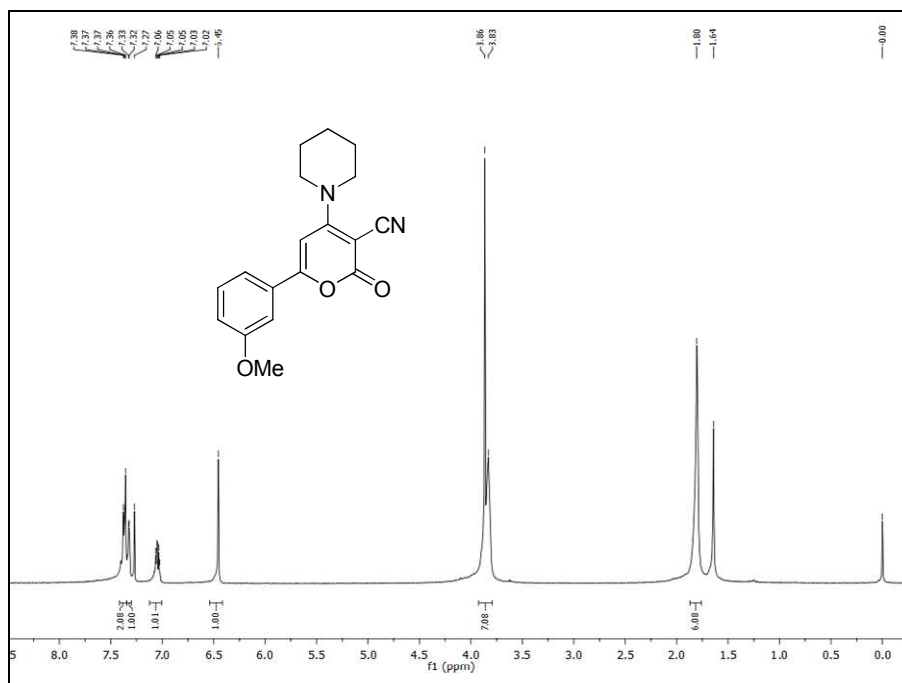


FIGURE S1: ¹H NMR (300 MHz, CDCl₃) spectrum of 6-(3-methoxyphenyl)-2-oxo-4-(piperidin-1-yl)-2H-pyran-3-carbonitrile **5c**.

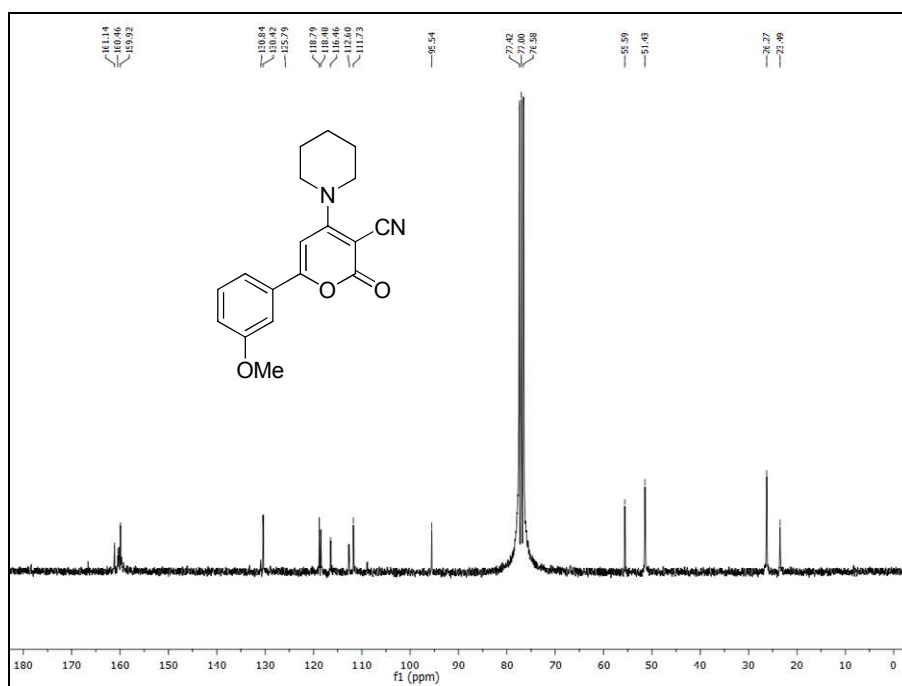


FIGURE S2: ¹³C NMR (75 MHz, CDCl₃) spectrum of 6-(3-methoxyphenyl)-2-oxo-4-(piperidin-1-yl)-2H-pyran-3-carbonitrile **5c**.

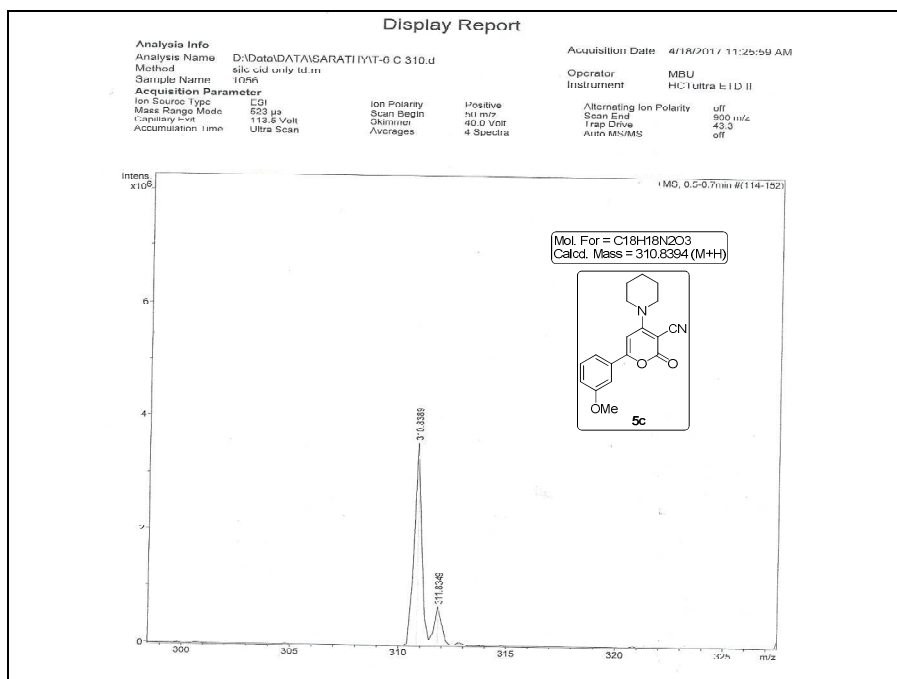


FIGURE S3: HRMS spectrum of 6-(3-methoxyphenyl)-2-oxo-4-(piperidin-1-yl)-2*H*-pyran-3-carbonitrile **5c**.

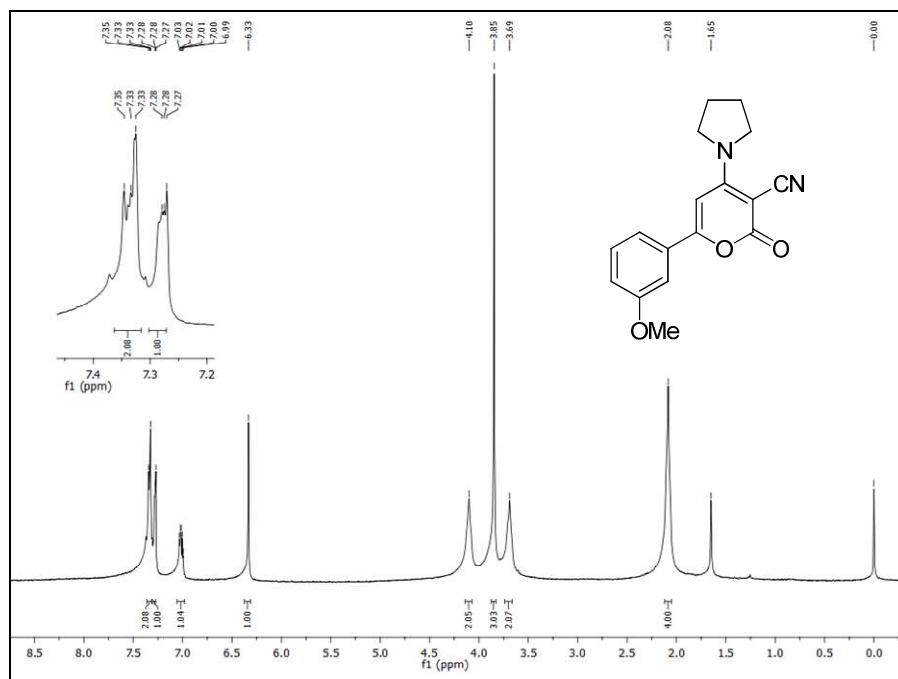


FIGURE S4: ¹H NMR (300 MHz, CDCl₃) spectrum of 6-(3-methoxyphenyl)-2-oxo-4-(pyrrolidin-1-yl)-2*H*-pyran-3-carbonitrile **5d**.

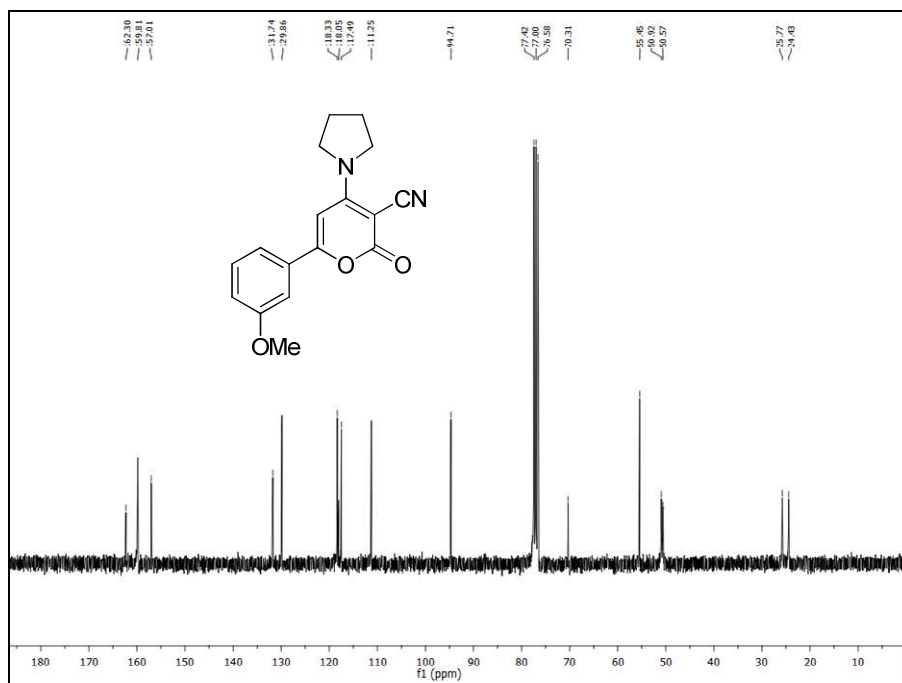


FIGURE S5: ^{13}C NMR (75 MHz, CDCl_3) spectrum of 6-(3-methoxyphenyl)-2-oxo-4-(pyrrolidin-1-yl)-2H-pyran-3-carbonitrile **5d**.

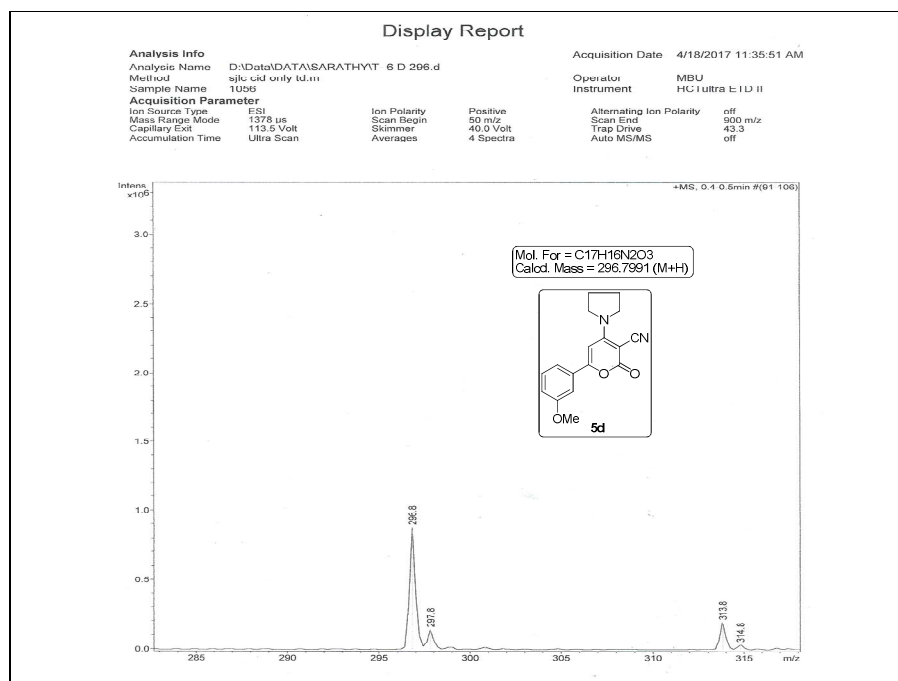


FIGURE S6: HRMS spectrum of 6-(3-methoxyphenyl)-2-oxo-4-(pyrrolidin-1-yl)-2H-pyran-3-carbonitrile **5d**.

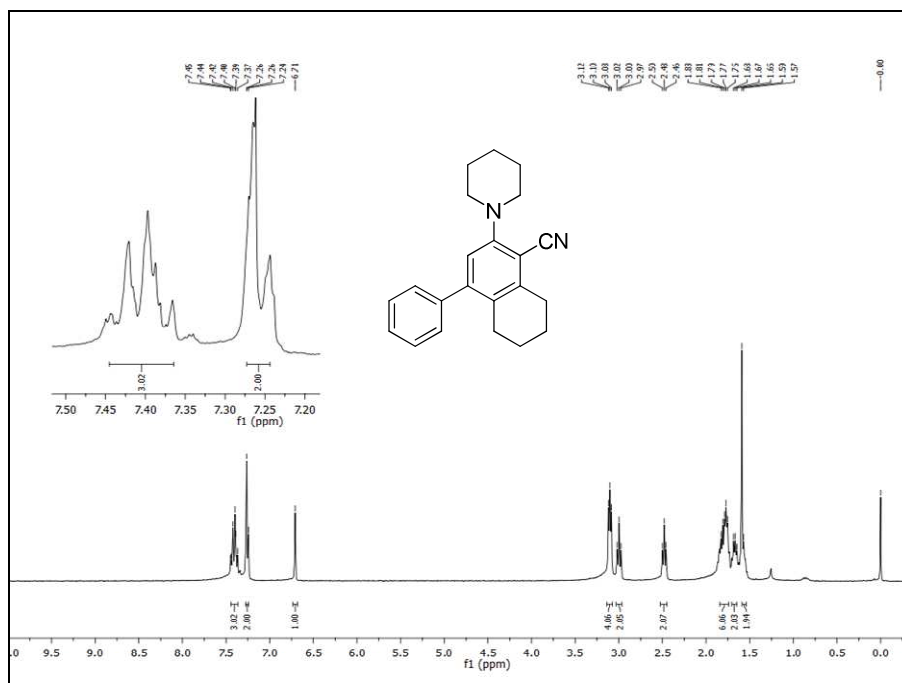


FIGURE S7: ^1H NMR (300 MHz, CDCl_3) spectrum of 4-phenyl-2-(piperidin-1-yl)-5,6,7,8-tetrahydronaphthalene-1-carbonitrile **7a**.

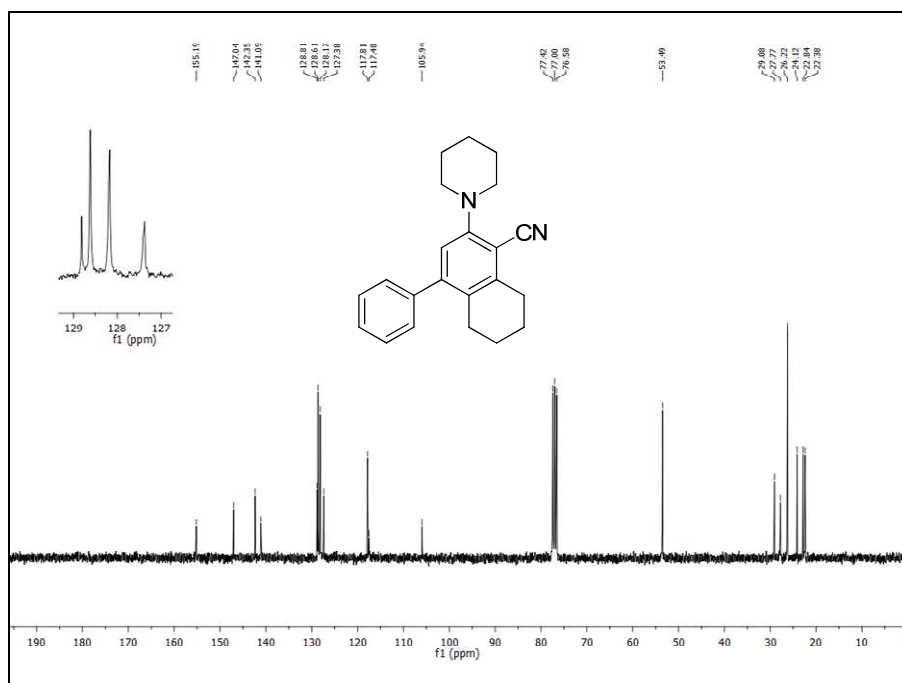


FIGURE S8: ^{13}C NMR (75 MHz, CDCl_3) spectrum of 4-phenyl-2-(piperidin-1-yl)-5,6,7,8-tetrahydronaphthalene-1-carbonitrile **7a**.

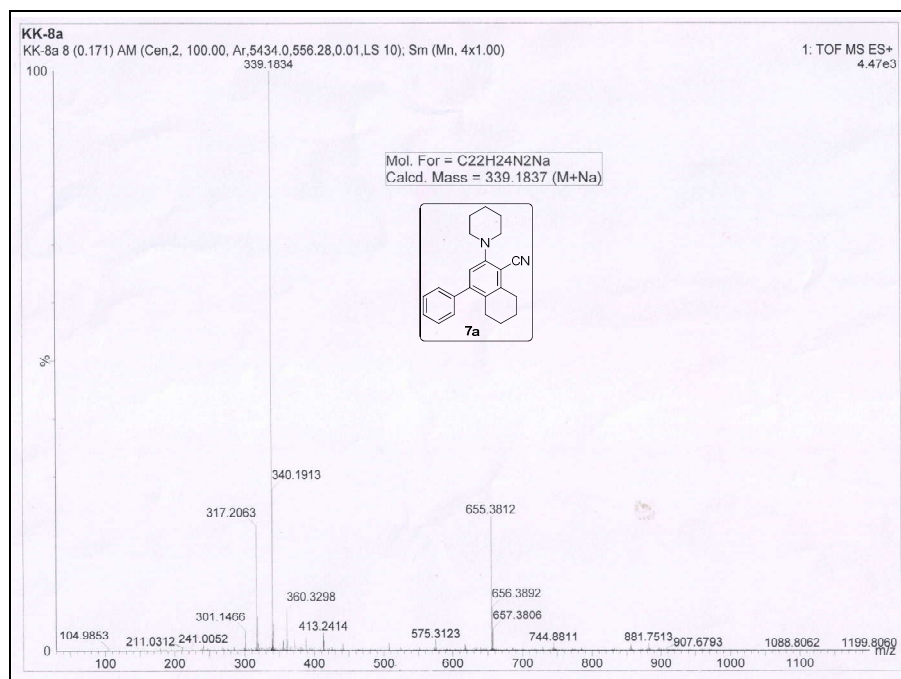


FIGURE S9: HRMS spectrum of 4-phenyl-2-(piperidin-1-yl)-5,6,7,8-tetrahydronaphthalene-1-carbonitrile **7a**.

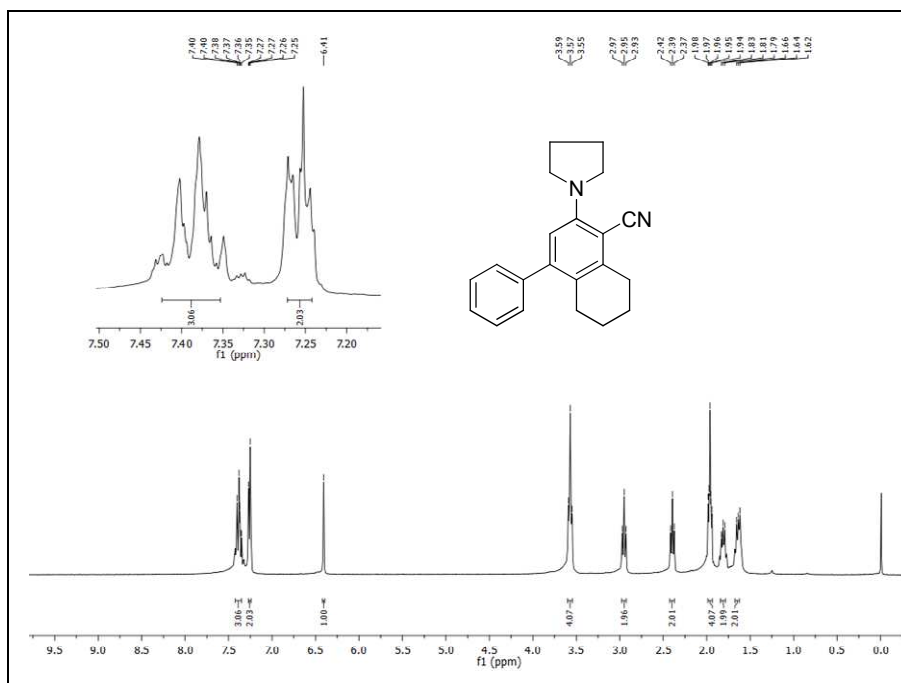


FIGURE S10: ¹H NMR (300 MHz, CDCl₃) spectrum of 4-phenyl-2-(pyrrolidin-1-yl)-5,6,7,8-tetrahydronaphthalene-1-carbonitrile **7b**.

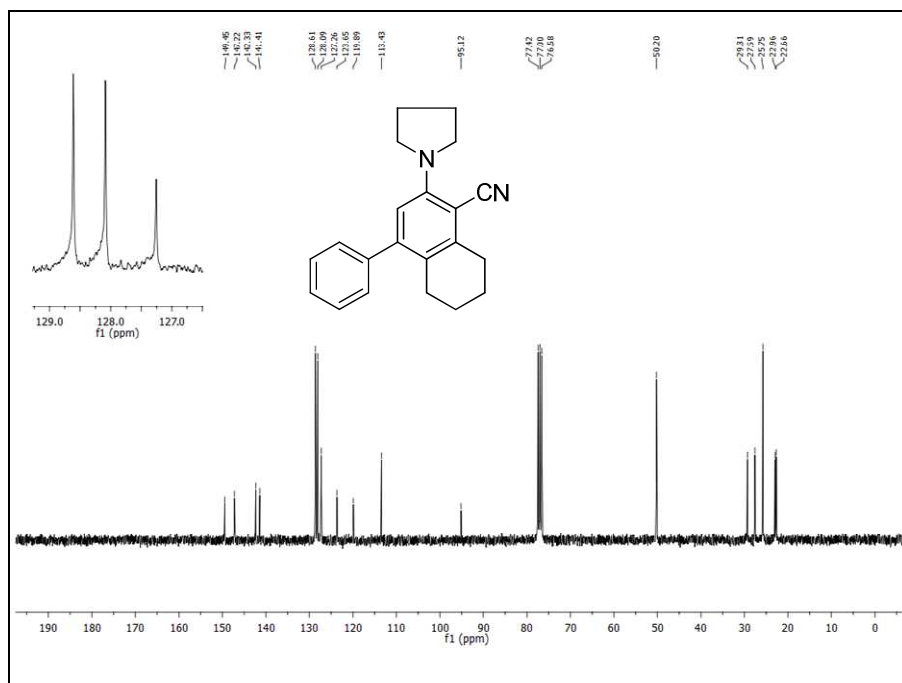


FIGURE S11: ^{13}C NMR (75 MHz, CDCl_3) spectrum of 4-phenyl-2-(pyrrolidin-1-yl)-5,6,7,8-tetrahydronaphthalene-1-carbonitrile **7b**.

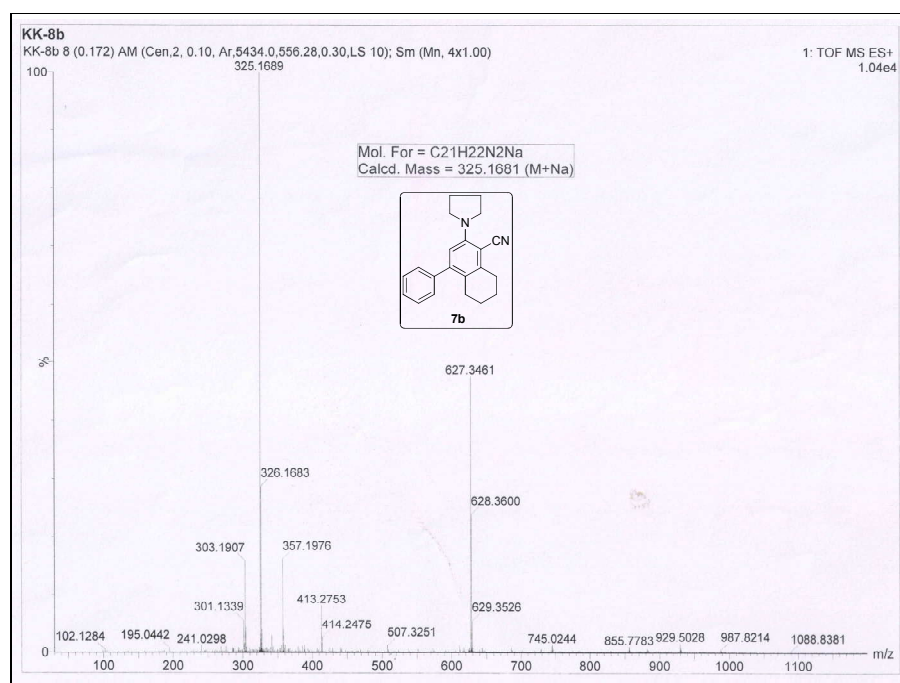


FIGURE S12: HRMS spectrum of 4-phenyl-2-(pyrrolidin-1-yl)-5,6,7,8-tetrahydronaphthalene-1-carbonitrile **7b**.

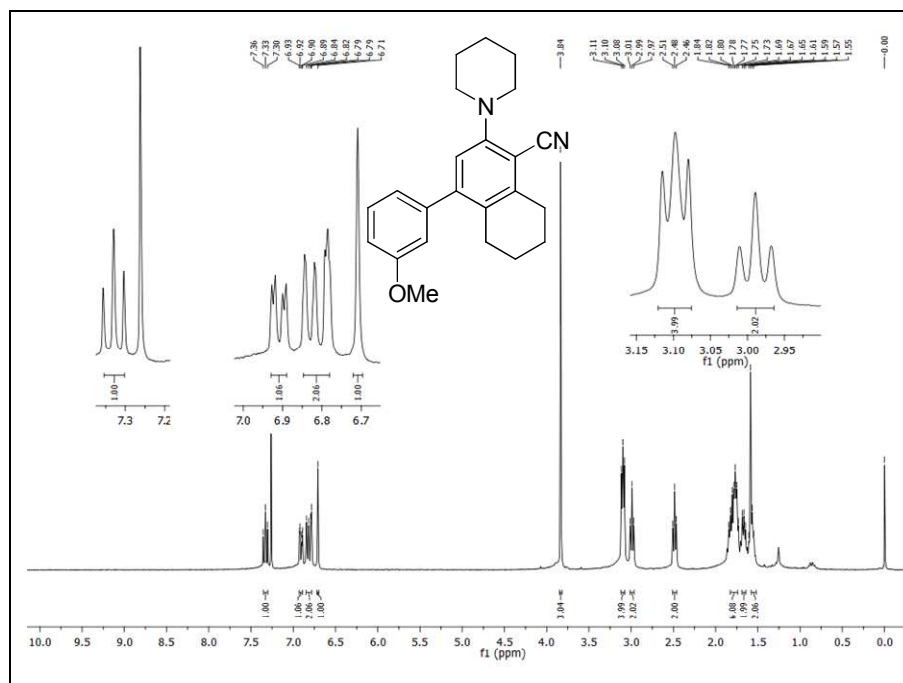


FIGURE S 13: ¹H NMR (300 MHz, CDCl₃) spectrum of 4-(3-methoxyphenyl)-2-(piperidin-1-yl)-5,6,7,8-tetrahydronaphthalene-1-carbonitrile **7c**.

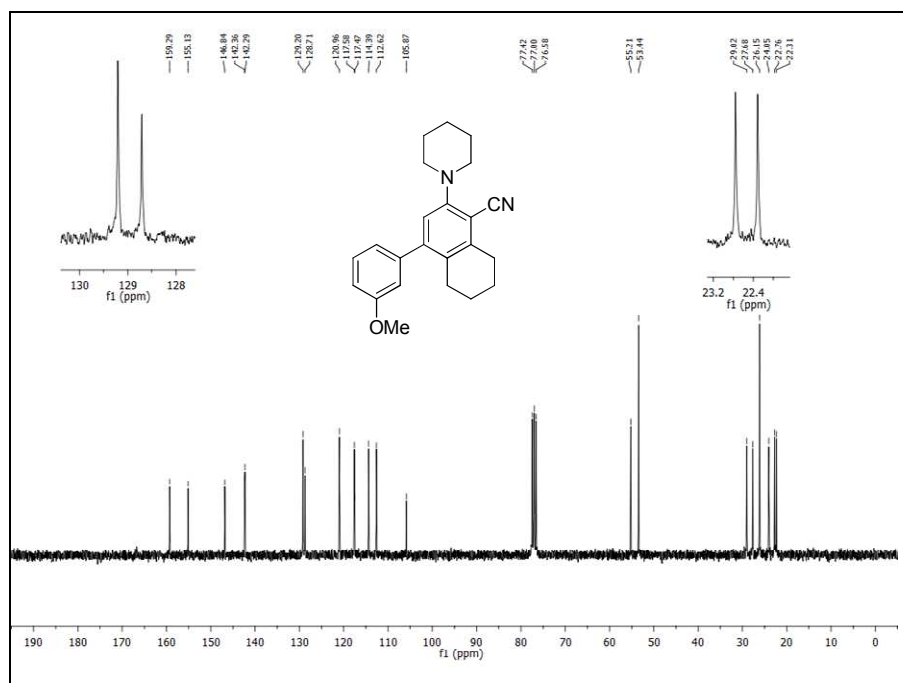


FIGURE S14: ^{13}C NMR (75 MHz, CDCl_3) spectrum of 4-(3-methoxyphenyl)-2-(piperidin-1-yl)-5,6,7,8-tetrahydronaphthalene-1-carbonitrile **7c**.

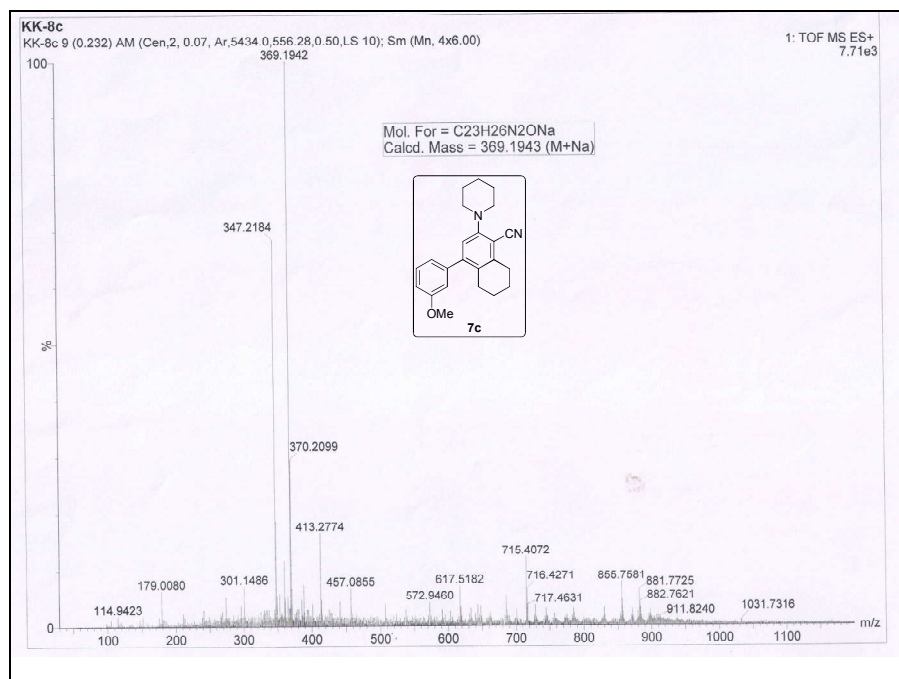


FIGURE S15: HRMS spectrum of 4-(3-methoxyphenyl)-2-(piperidin-1-yl)-5,6,7,8-tetrahydronaphthalene-1-carbonitrile **7c**.

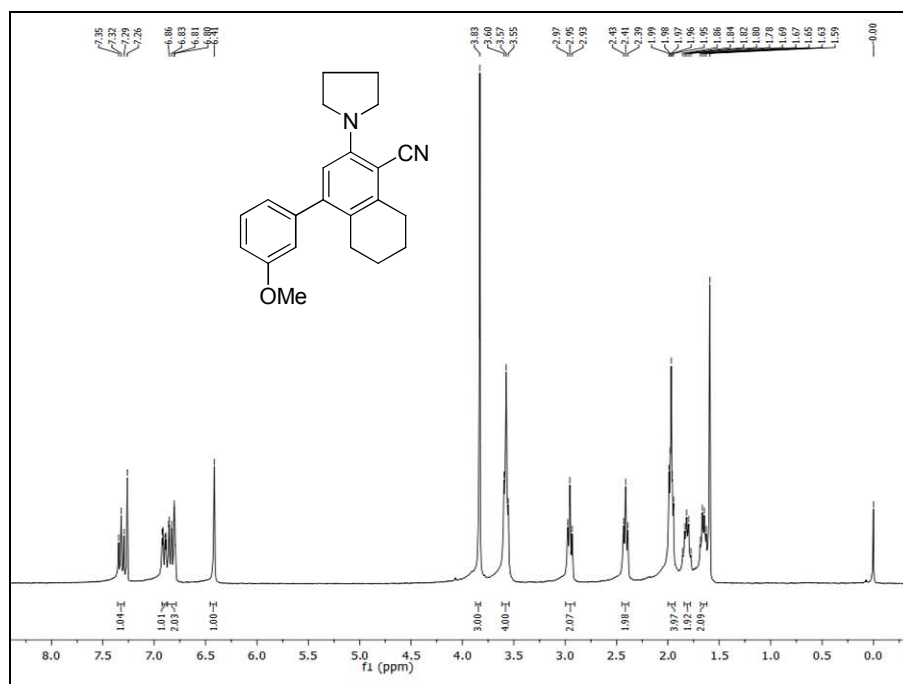


FIGURE S16: ¹H NMR (300 MHz, CDCl₃) spectrum of 4-(3-methoxyphenyl)-2-(pyrrolidin-1-yl)-5,6,7,8-tetrahydronaphthalene-1-carbonitrile **7d**.

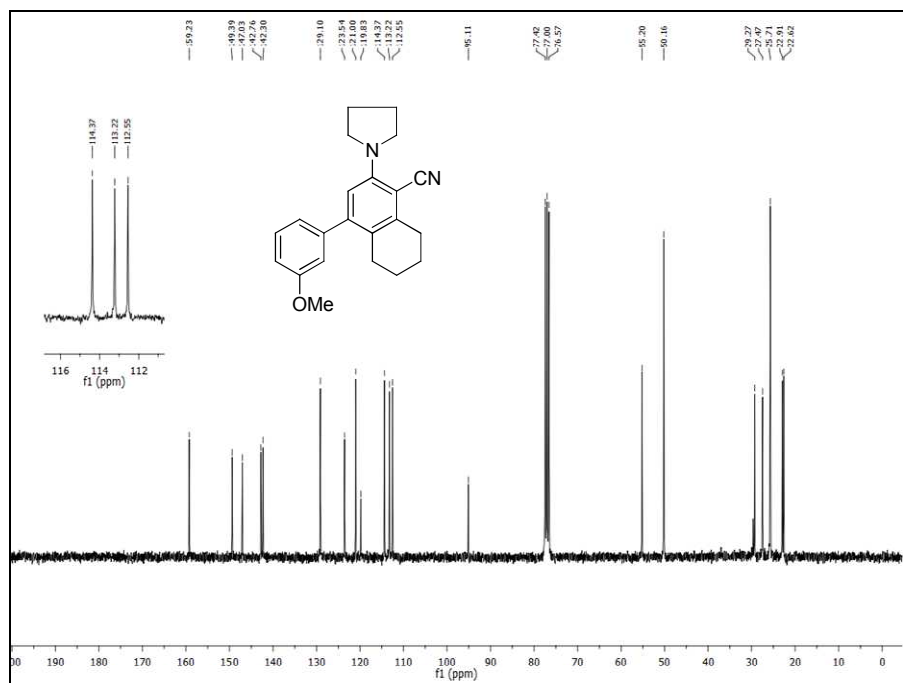


FIGURE S17: ^{13}C NMR (75 MHz, CDCl_3) spectrum of 4-(3-methoxyphenyl)-2-(pyrrolidin-1-yl)-5,6,7,8-tetrahydronaphthalene-1-carbonitrile **7d**.

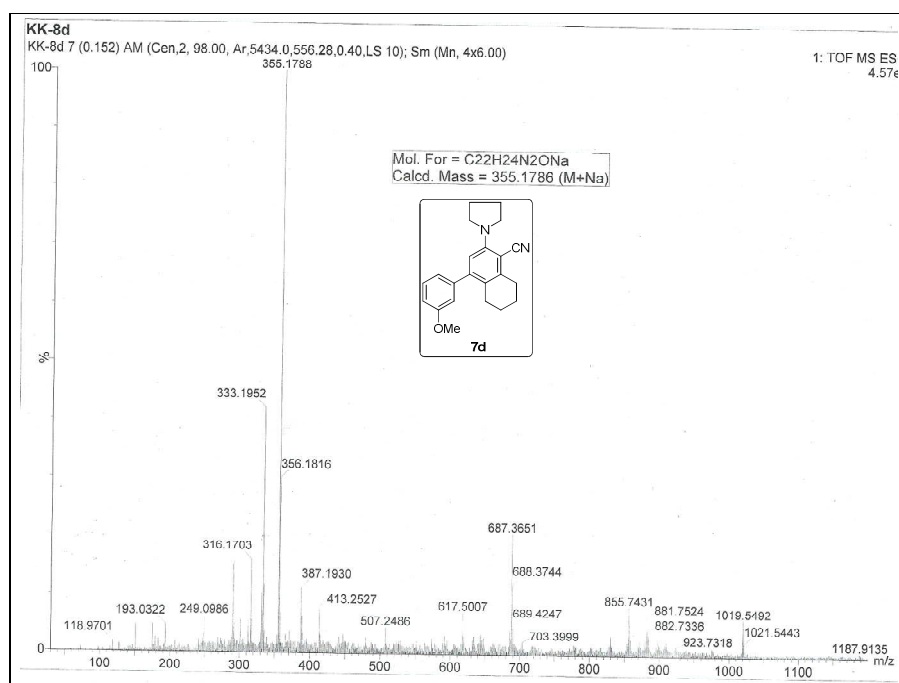


FIGURE S18: HRMS spectrum of 4-(3-methoxyphenyl)-2-(pyrrolidin-1-yl)-5,6,7,8-tetrahydronaphthalene-1-carbonitrile **7d**.

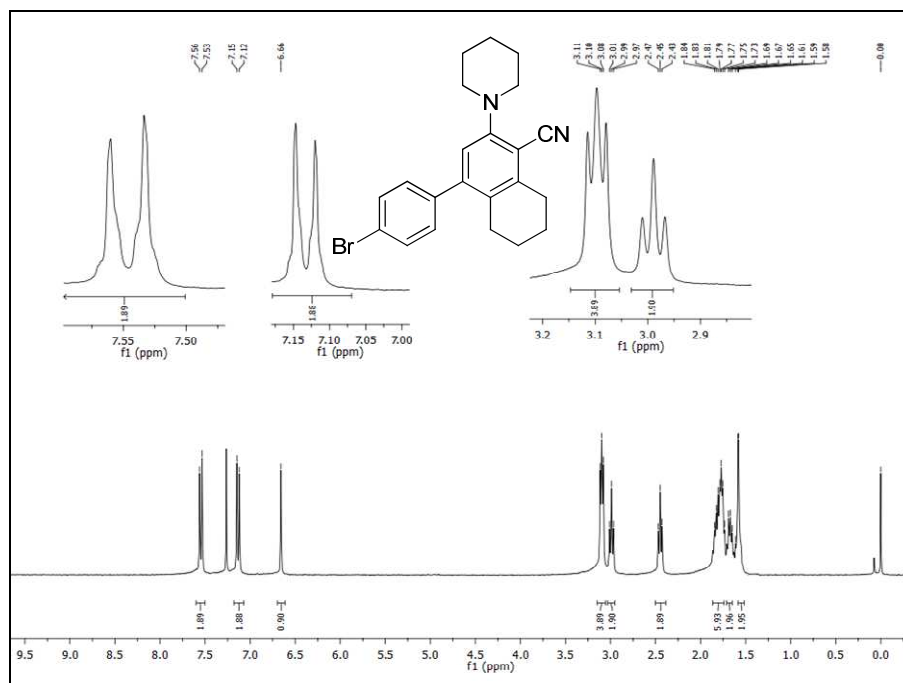


FIGURE S19: ¹H NMR (300 MHz, CDCl₃) spectrum of 4-(4-bromophenyl)-2-(piperidin-1-yl)-5,6,7,8-tetrahydronaphthalene-1-carbonitrile **7e**.

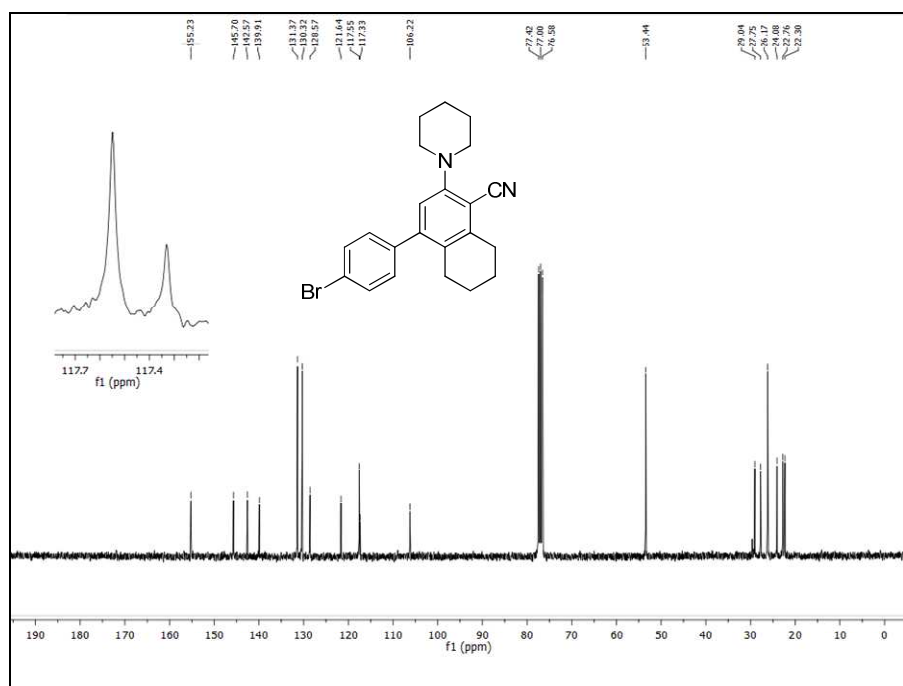


FIGURE S20: ¹³C NMR (75 MHz, CDCl₃) spectrum of 4-(4-bromophenyl)-2-(piperidin-1-yl)-5,6,7,8-tetrahydronaphthalene-1-carbonitrile **7e**.

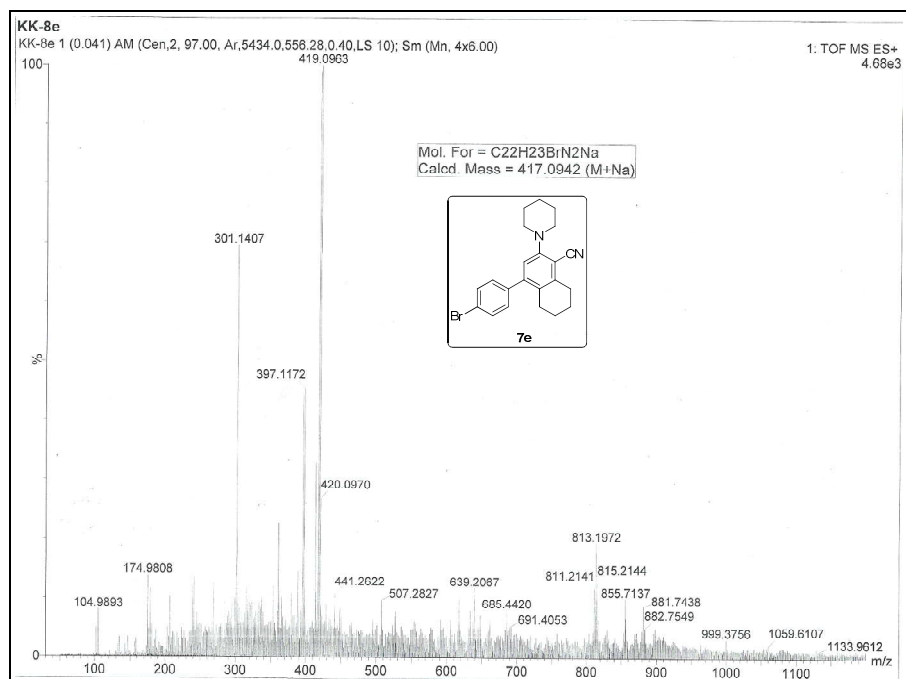


FIGURE S21: HRMS spectrum of 4-(4-bromophenyl)-2-(piperidin-1-yl)-5,6,7,8-tetrahydronaphthalene-1-carbonitrile **7e**.

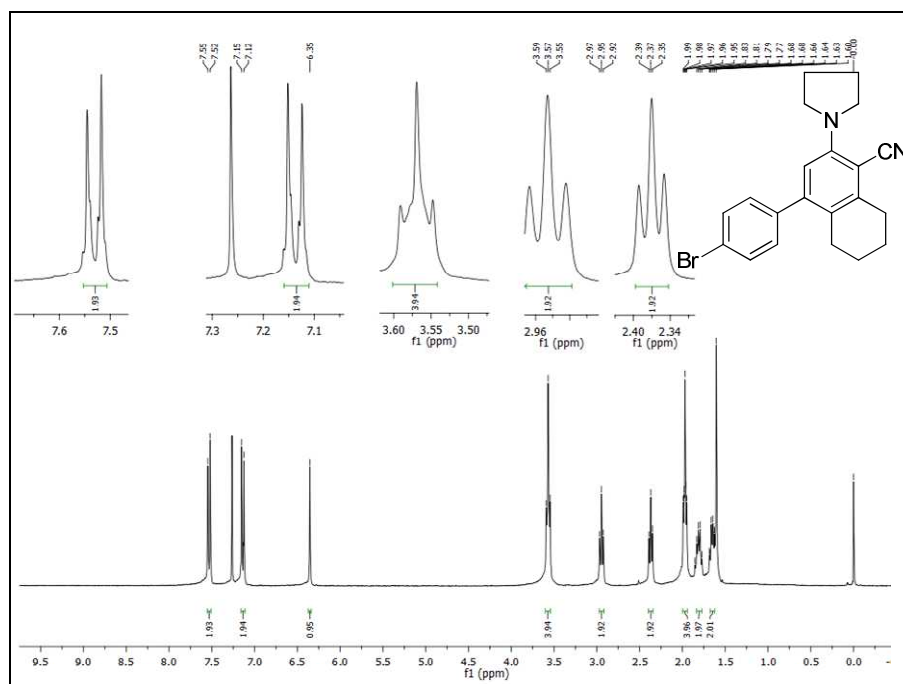


FIGURE S22: ^1H NMR (300 MHz, CDCl_3) spectrum of 4-(4-bromophenyl)-2-(pyrrolidin-1-yl)-5,6,7,8-tetrahydronaphthalene-1-carbonitrile **7f**.

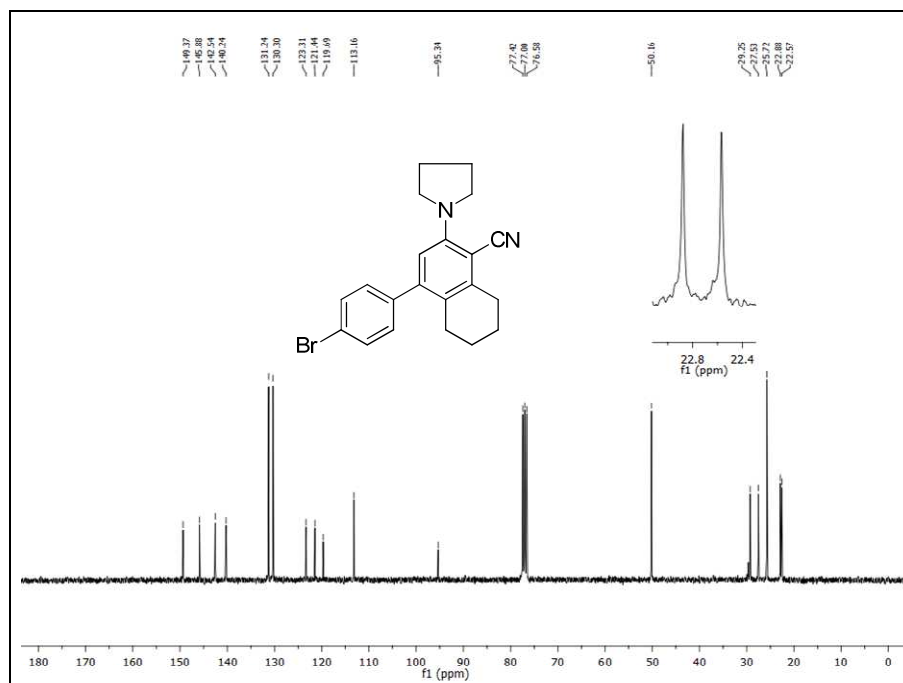


FIGURE S23: ¹³C NMR (75 MHz, CDCl₃) spectrum of 4-(3-methoxyphenyl)-2-(piperidin-1-yl)-5,6,7,8-tetrahydronaphthalene-1-carbonitrile **7f**.

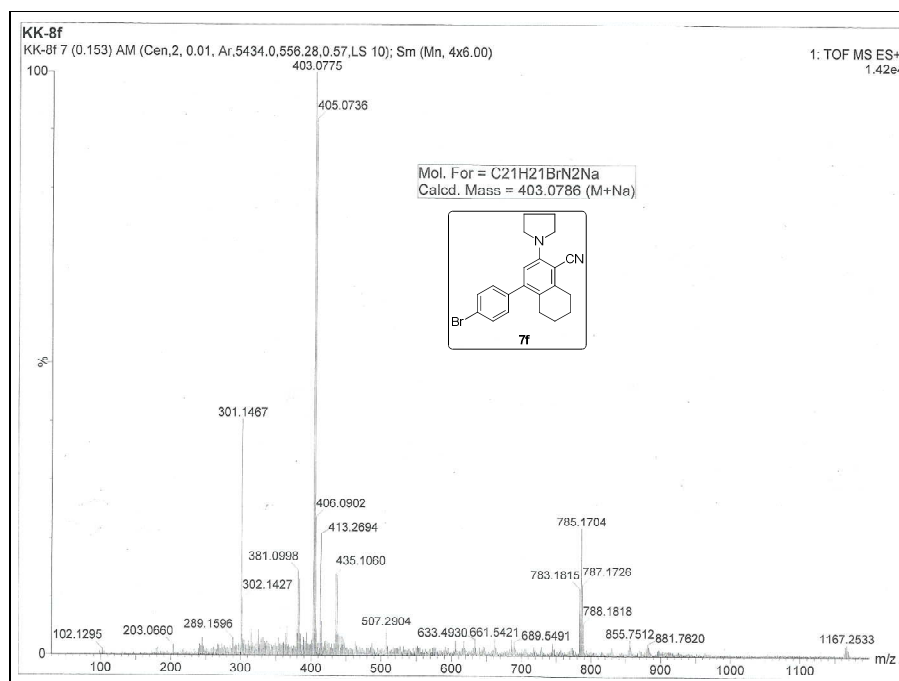


FIGURE S24: HRMS spectrum of 4-(3-methoxyphenyl)-2-(piperidin-1-yl)-5,6,7,8-tetrahydronaphthalene-1-carbonitrile **7f**.

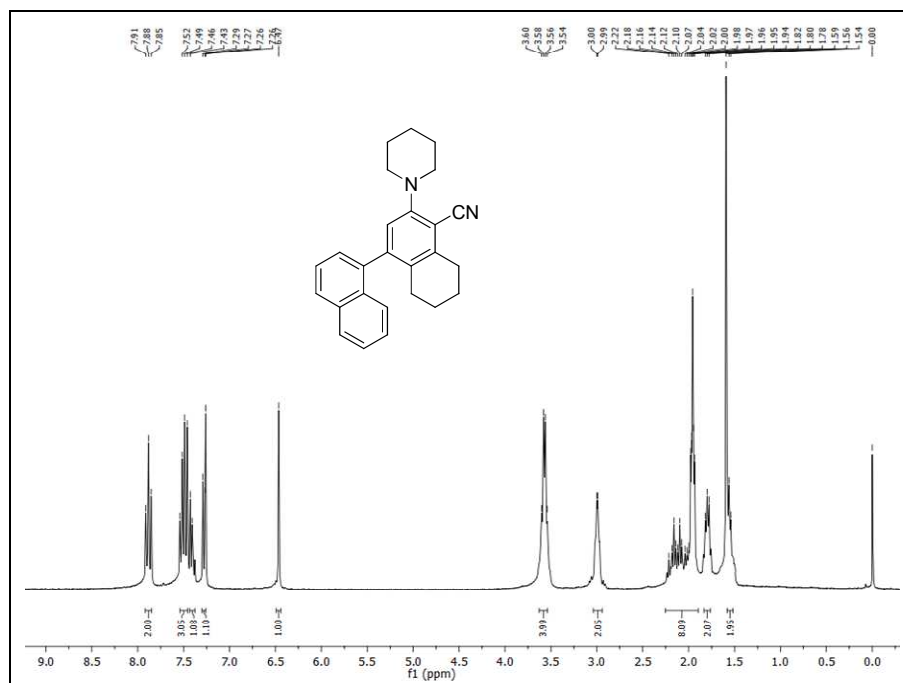


FIGURE S25: ¹H NMR (300 MHz, CDCl₃) spectrum of 3-(piperidin-1-yl)-5,6,7,8-tetrahydro-1,1'-binaphthyl-4-carbonitrile **7g**.

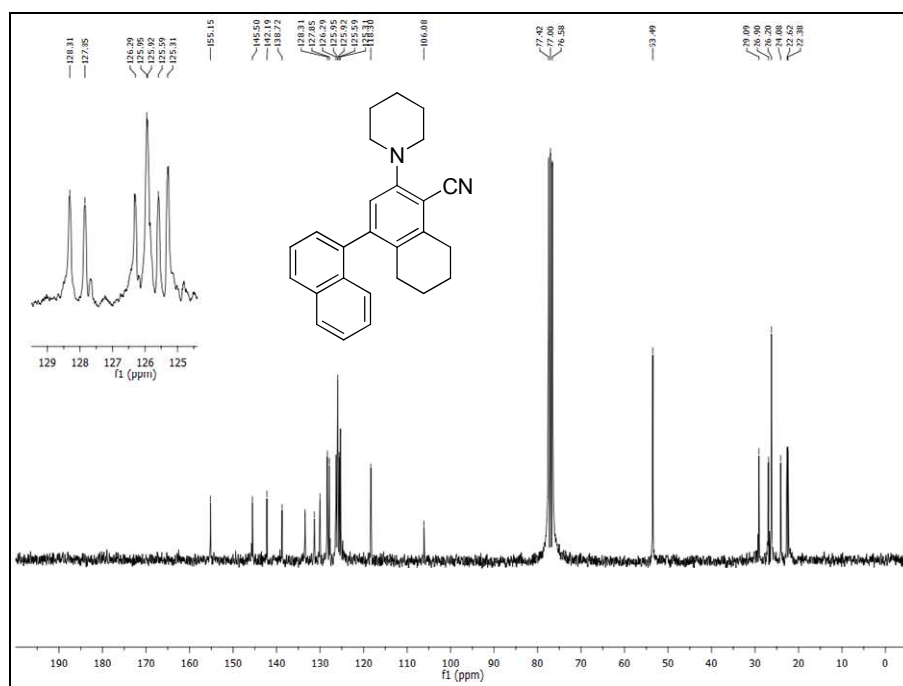


FIGURE S26: ^{13}C NMR (75 MHz, CDCl_3) spectrum of 3-(piperidin-1-yl)-5,6,7,8-tetrahydro-1,1'-binaphthyl-4-carbonitrile **7g**.

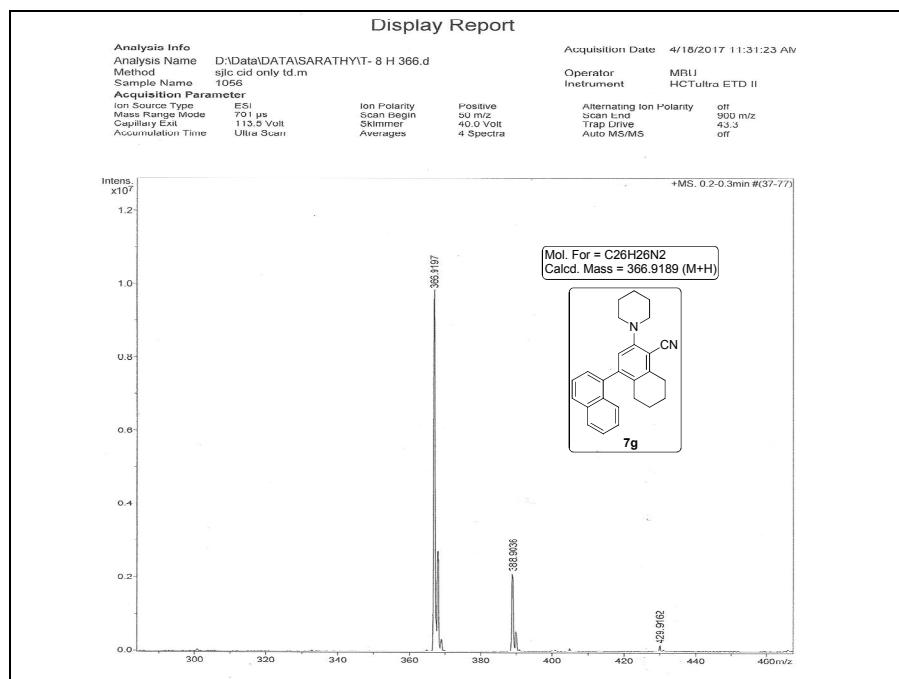


FIGURE S27: HRMS spectrum of 3-(piperidin-1-yl)-5,6,7,8-tetrahydro-1,1'-binaphthyl-4-carbonitrile **7g**.

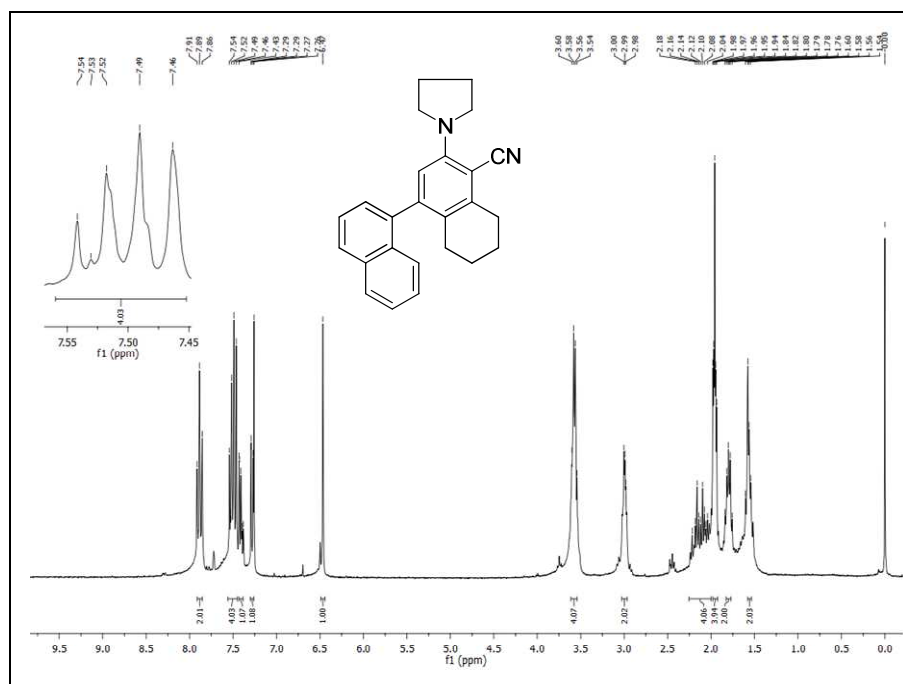


FIGURE S28: ¹H NMR (300 MHz, CDCl₃) spectrum of 3-(pyrrolidin-1-yl)-5,6,7,8-tetrahydro-1,1'-binaphthyl-4-carbonitrile **7h**.

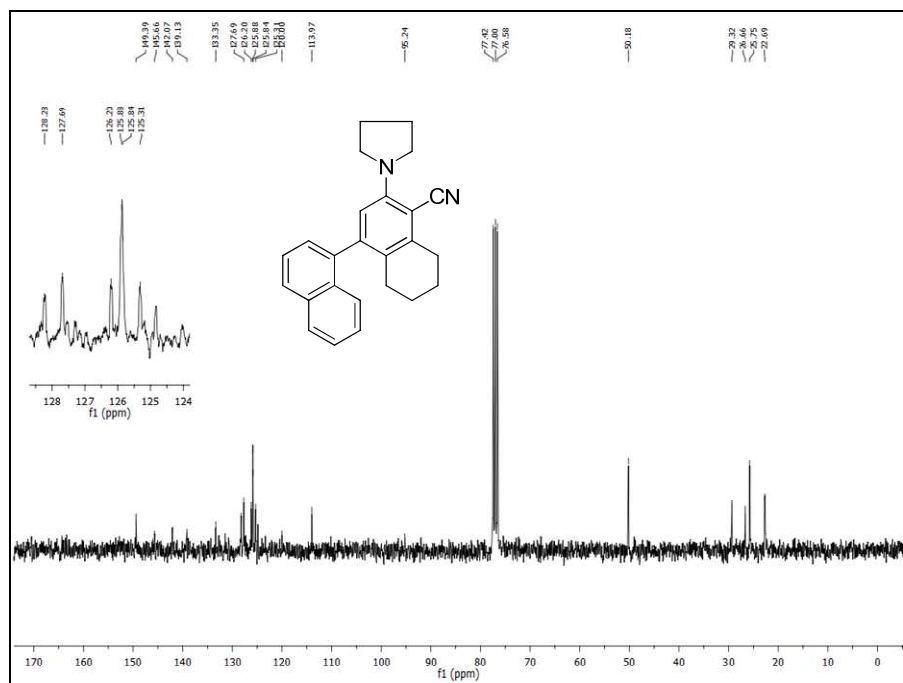


FIGURE S29: ¹³C NMR (75 MHz, CDCl₃) spectrum of 3-(pyrrolidin-1-yl)-5,6,7,8-tetrahydro-1,1'-binaphthyl-4-carbonitrile **7h**.

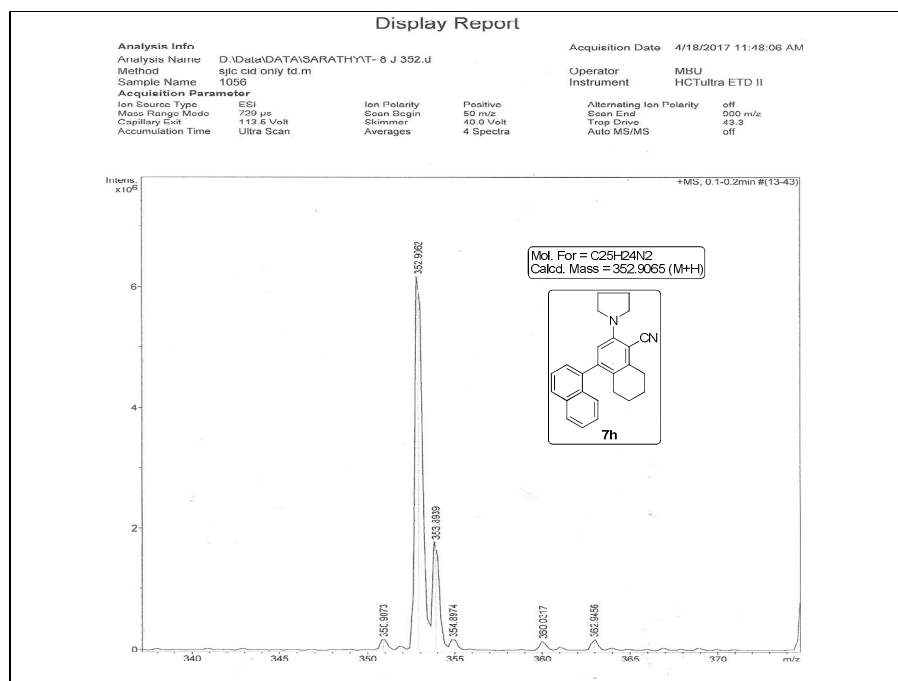


FIGURE S30: HRMS spectrum of 3-(pyrrolidin-1-yl)-5,6,7,8-tetrahydro-1,1'-binaphthyl-4-carbonitrile **7h**.

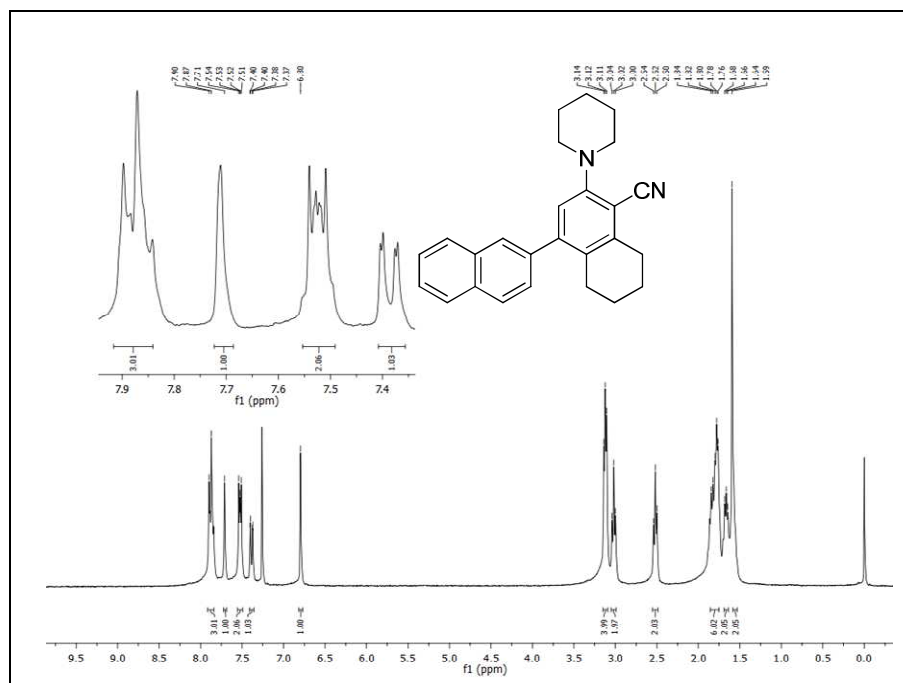


FIGURE S31: ¹H NMR (300 MHz, CDCl₃) spectrum of 3-(piperidin-1-yl)-5,6,7,8-tetrahydro-1,2'-binaphthyl-4-carbonitrile **7i**.

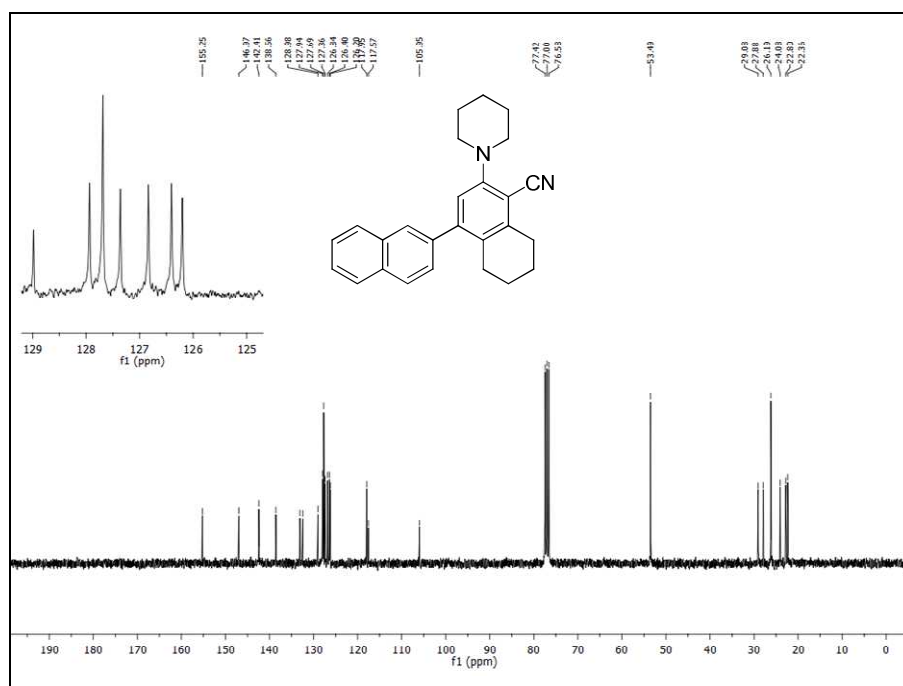


FIGURE S32: ¹³C NMR (75 MHz, CDCl₃) spectrum of 3-(piperidin-1-yl)-5,6,7,8-tetrahydro-1,2'-binaphthyl-4-carbonitrile **7i**.

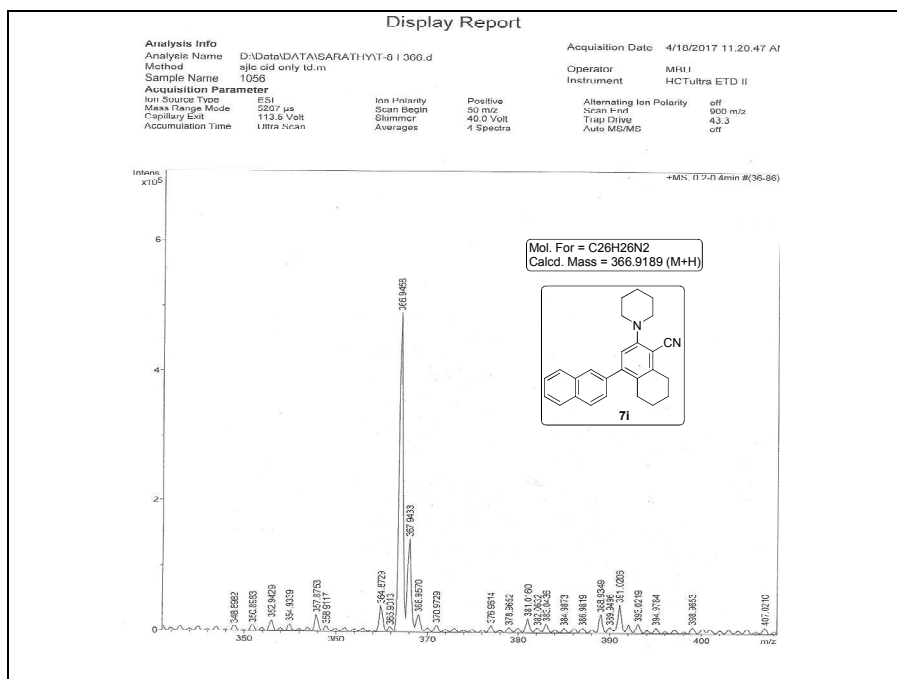


FIGURE S33: HRMS spectrum of 3-(piperidin-1-yl)-5,6,7,8-tetrahydro-1,2'-binaphthyl-4-carbonitrile **7i**.

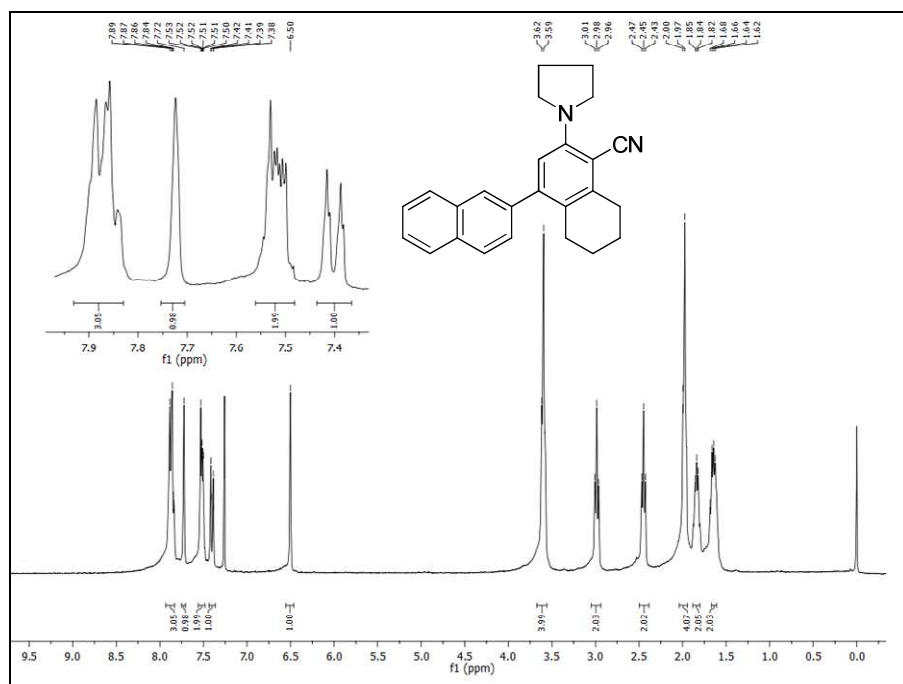


FIGURE S34: ¹H NMR (300 MHz, CDCl₃) spectrum of 3-(pyrrolidin-1-yl)-5,6,7,8-tetrahydro-1,1'-binaphthyl-4-carbonitrile **7j**

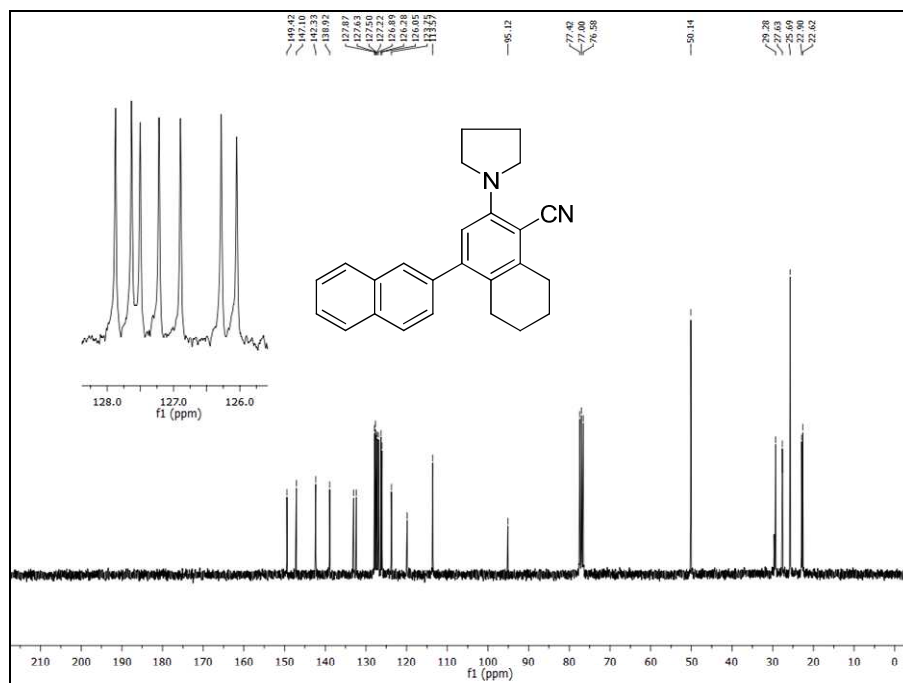


FIGURE S35: ¹³C NMR (75 MHz, CDCl₃) spectrum of 3-(pyrrolidin-1-yl)-5,6,7,8-tetrahydro-1,1'-binaphthyl-4-carbonitrile **7j**.

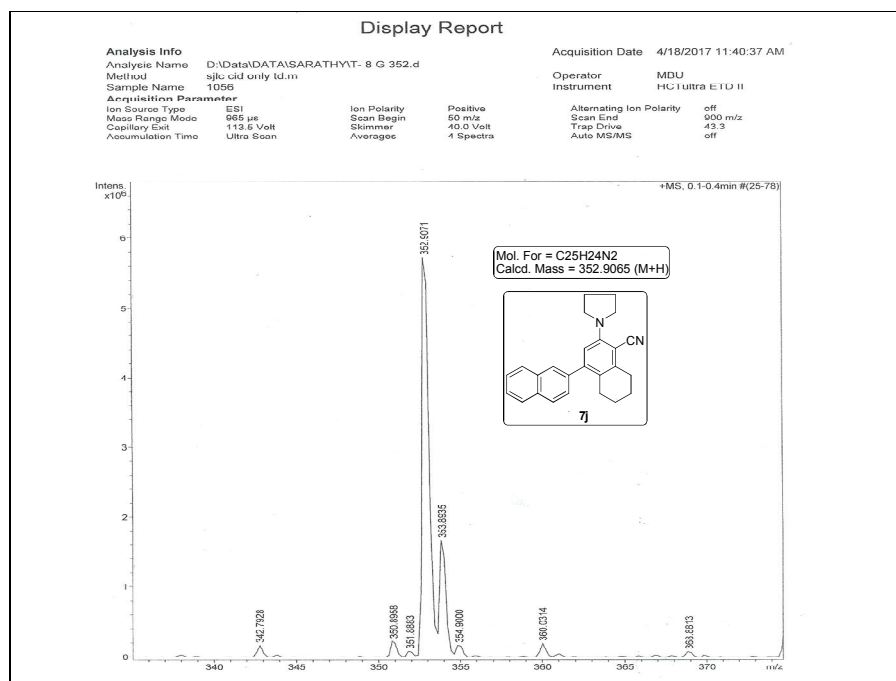


FIGURE S36: HRMS spectrum of 3-(pyrrolidin-1-yl)-5,6,7,8-tetrahydro-1,1'-binaphthyl-4-carbonitrile **7j**.