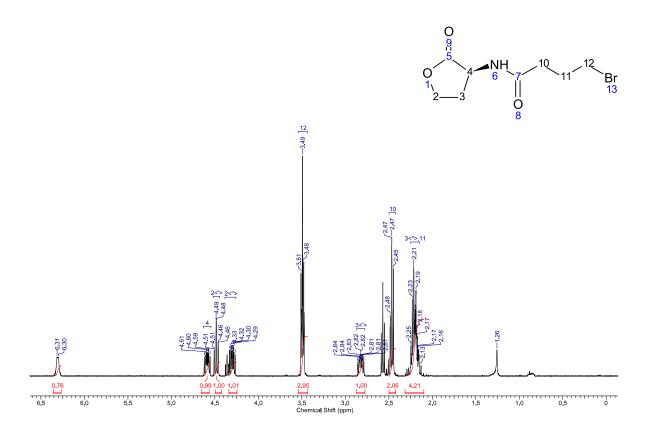
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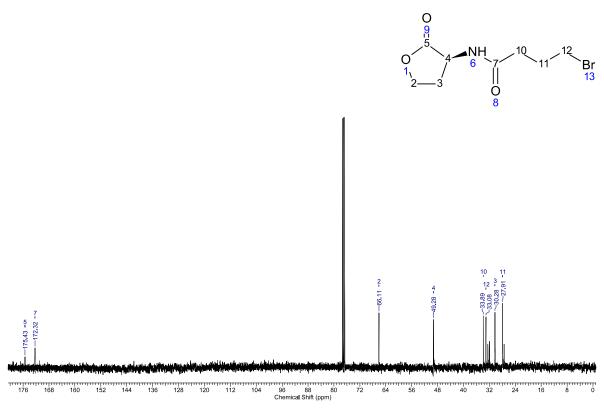
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1.40	$1- Cyclopropyl-6-fluoro-7- \big(4-\big(4-\big(((1R,2R)-2-hydroxycyclopentyl)amino\big)-4-oxobutyl\big)-1H-1,2,3-1-2-hydroxycyclopentyl\big)$	
	triazol-4-yl)butyl)piperazin-1-yl)-4-oxo-1,4-dihydroquinoline-3-carboxylic acid ${\bf 158}$	39
1.41	4-Chloro- $N$ -((trans)-2-hydroxycyclohexyl) butanamide ${\bf 159}$	40
1.42	4-Azido- $N$ -(( $trans$ )-2-hydroxycyclohexyl) butanamide ${\bf 160}$	40
1.43	lem:methyl-1-cyclopropyl-6-fluoro-7-(4-(4-(((trans)-2-hydroxycyclohexyl)amino)-4-oxobutyl) piperazin-property ((trans)-2-hydroxycyclohexyl) piperazin-property ((trans)-2-hydro	
	1-yl)-4-oxo-1,4-dihydroquinoline-3-carboxylate ${\bf 161}$	41
1.44	$Methyl\ 1-cyclopropyl-6-fluoro-4-oxo-7- (4-(4-oxo-4-((2-oxocyclohexyl)amino)-butyl)piperazin-1-yl)-1-(2-oxocyclohexyl)amino-1-(2-oxo$	
	1,4-dihydroquinoline-3-carboxylate $162$	42
1.45	1- Cyclopropyl-6-fluoro-7- (4-(4-(4-(((trans)-2-hydroxycyclohexyl)amino)-4-oxobutyl)-1 H-1,2,3-tri-1-(4-(4-(4-(4-(4-(4-(((trans)-2-hydroxycyclohexyl)amino)-4-oxobutyl)-1 H-1,2,3-tri-1-(4-(4-(4-(4-(4-(4-(4-(4-(4-(4-(4-(4-(4-	
	azol-4-yl)butyl)piperazin-1-yl)-4-oxo-1,4-dihydroquinoline-3-carboxylic acid ${\bf 163}$	43
1.46	1-Cyclopropyl-6-fluoro-4-oxo-7- (4-(4-(4-(4-oxo-4-((2-oxocyclohexyl)amino)butyl)-1H-1,2,3-triazol-1-(2-oxocyclohexyl)amino)butyl)-1H-1,2,3-triazol-1-(2-oxocyclohexyl)amino)butyl)-1H-1,2,3-triazol-1-(2-oxocyclohexyl)amino)butyl)-1H-1,2,3-triazol-1-(2-oxocyclohexyl)amino)butyl)-1H-1,2,3-triazol-1-(2-oxocyclohexyl)amino)butyl)-1H-1,2,3-triazol-1-(2-oxocyclohexyl)amino)butyl)-1H-1,2,3-triazol-1-(2-oxocyclohexyl)amino)butyl)-1H-1,2,3-triazol-1-(2-oxocyclohexyl)amino)butyl)-1H-1,2,3-triazol-1-(2-oxocyclohexyl)amino)butyl)-1-(2-oxocyclohexyl	
	4-yl)butyl)piperazin-1-yl)-1,4-dihydroquinoline-3-carboxylic acid <b>164</b>	44

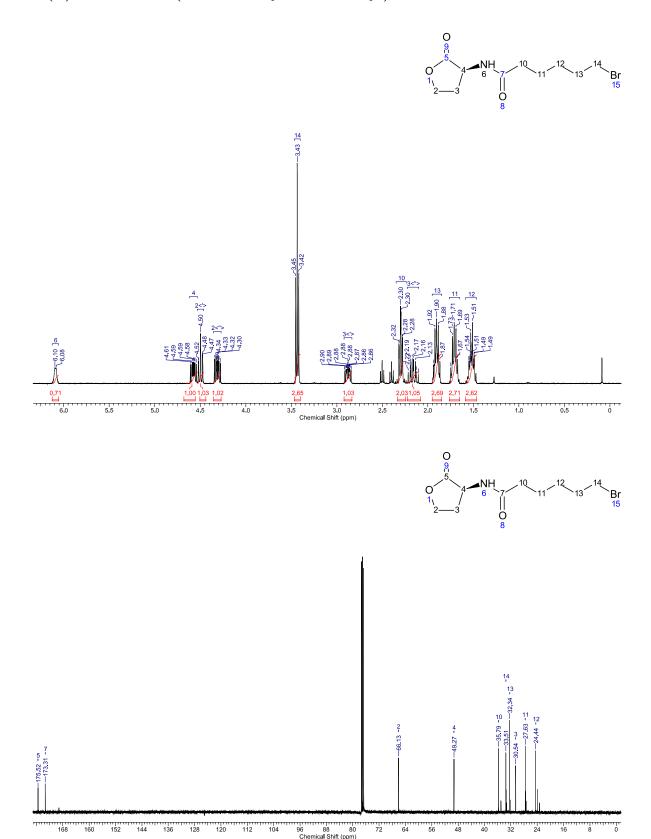
### 1 NMR spectra

#### $1.1 \quad (S)\text{-}4\text{-}Bromo-N-(2\text{-}oxotetra$ $hydrofuran-3-yl}) butanamide \ 44$

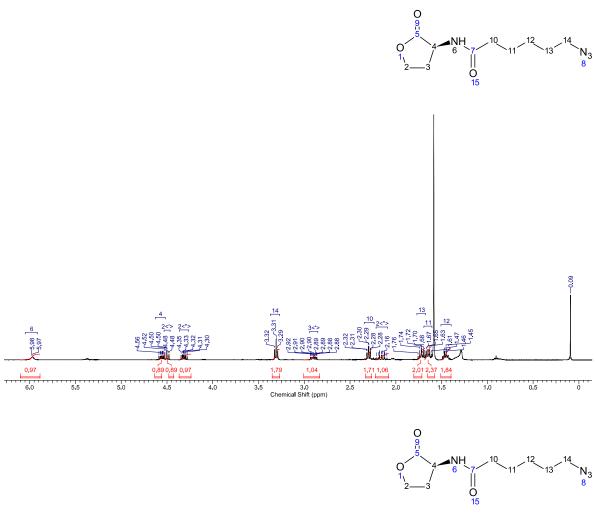


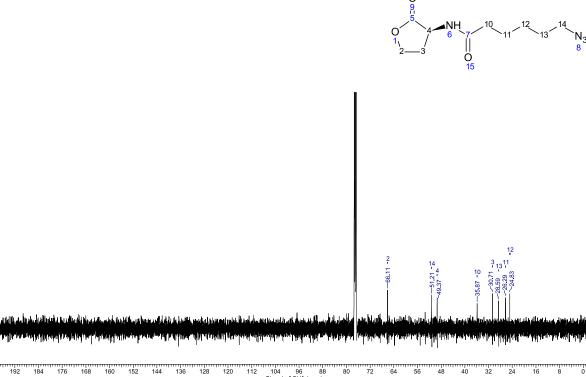


### $1.2 \quad (S) \hbox{-} 6\hbox{-} Bromo- \textit{N-} (2\hbox{-} oxotetra hydrofuran-3-yl) hexanamide \ 45$

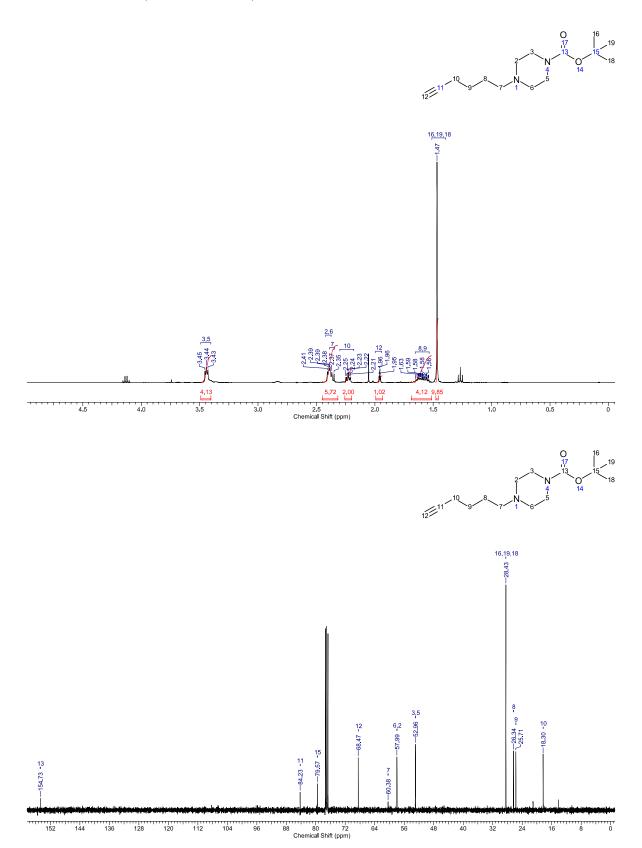


### $1.3 \quad (S)\mbox{-}6\mbox{-}\mathrm{Azido-}N\mbox{-}(2\mbox{-}\mathrm{oxotetrahydrofuran-}3\mbox{-}\mathrm{yl})\mbox{hexanamide} \ 47$

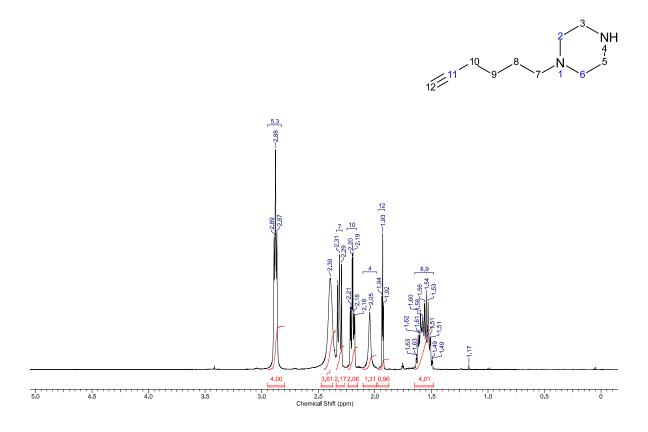


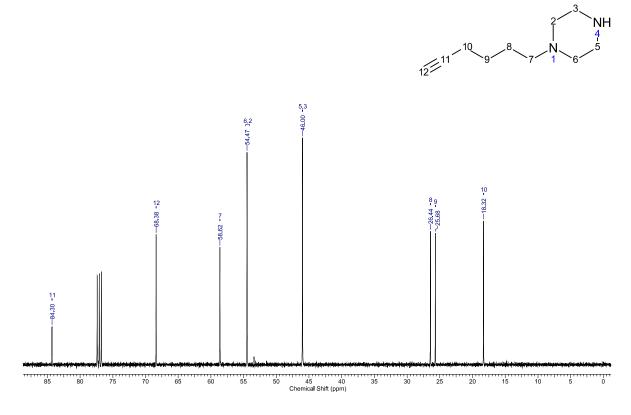


### 1.4 tert-Butyl 4-(hex-5-yn-1-yl)piperazine-1-carboxylate 51

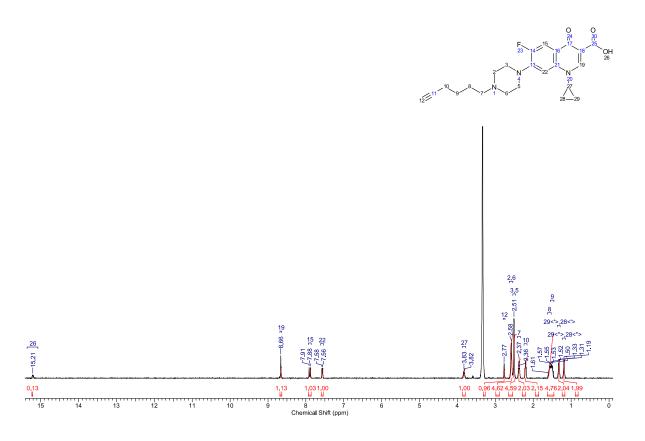


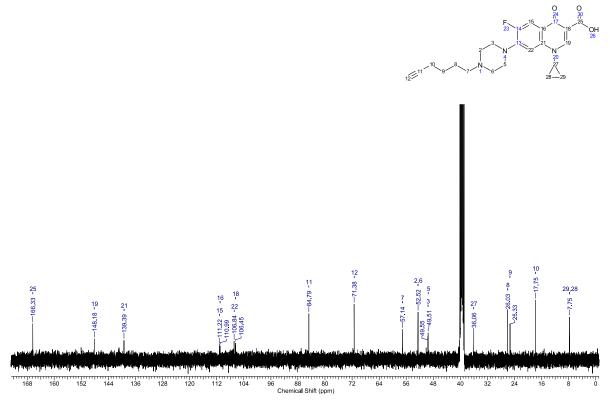
### $1.5\quad 1\hbox{-}(\text{Hex-5-yn-1-yl}) \text{piperazine } 52$





## $1.6 \quad 1\hbox{-Cyclopropyl-6-fluoro-7-(4-(hex-5-yn-1-yl)piperazin-1-yl)-4-oxo-1,4-dihydroquinoline-3-carboxylic acid 54}$





1.7	$5\hbox{-}(4\hbox{-}(Hex\hbox{-}5\hbox{-}yn\hbox{-}1\hbox{-}yloxy)\hbox{-}3,}5\hbox{-}dimethoxybenzyl) pyrimidine-2,}4\hbox{-}diamine\ 124$
Y4Tr	·i_H.pdf
Y4Tr	i_C.pdf

1.8	$(S)\hbox{-}1\hbox{-}Cyclopropyl-6\hbox{-}fluoro\hbox{-}4\hbox{-}oxo\hbox{-}7\hbox{-}(4\hbox{-}(4\hbox{-}(1\hbox{-}(2\hbox{-}oxo\hbox{-}2\hbox{-}((2\hbox{-}oxo\hbox{tetrahydrofuran-}3\hbox{-}yl)\hbox{amino})\hbox{ethyl})\hbox{-}1$$H$-1,2,3-triazol-4-yl) butyl) piperazin-1-yl)\hbox{-}1,4-dihydroquinoline-3-carboxylic acid 125}$
HL2T	4Cip_H.pdf
HL2T	4Cip_C.pdf

yl)amino)butyl)-1 $H$ -1,2,3-triazo $3$ -carboxylic acid 12 $6$	 i) 1,1 dinydroquinol
.4T4Cip_H.pdf	
4T4Cip_C.pdf	

	oxo-7-(4-(4-(1-(6-oxo-6-((2-oxotetrahydrofuran-riazol-4-yl)butyl)piperazin-1-yl)-1,4-dihydroquin
HL6T4Cip_H.pdf	
IL6T4Cip_C.pdf	

1.11	1-Cyclopropyl-6-fluoro-7-(4-(4-(1-(2-heptyl-4-oxo-1,4-dihydroquinolin-6-yl)-1H 1,2,3-triazol-4-yl)butyl)piperazin-1-yl)-4-oxo-1,4-dihydroquinoline-3-carboxylidacid 128
6ннот	4Cip_H.pdf
6ннот	4Cip_C.pdf

1.12 $(S)$ -4- $(4$ - $(4$ - $(4$ - $((2,4$ -Diaminopyrimidin-5-yl)model $H$ -1,2,3-triazol-1-yl)- $N$ - $(2$ -oxotetrahydrofuration $(S)$ -	
HL4T4Tri_H.pdf	
HL4T4Tri_C.pdf	

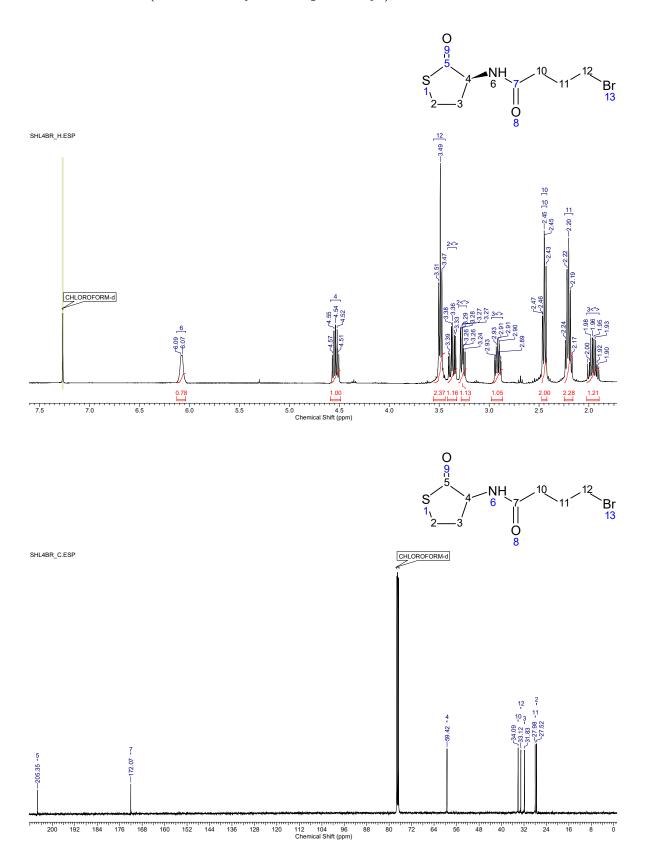
yl)-2,6-dimethoxyphenoxy)buty 3-yl)hexanamide 130

1H-1,2,3-triazol-1-yl)-2-heptylquinolin- $4(1H)$ -one 131	
6HHQT4Tri_H.pdf	
6HHQT4Tri_C.pdf	

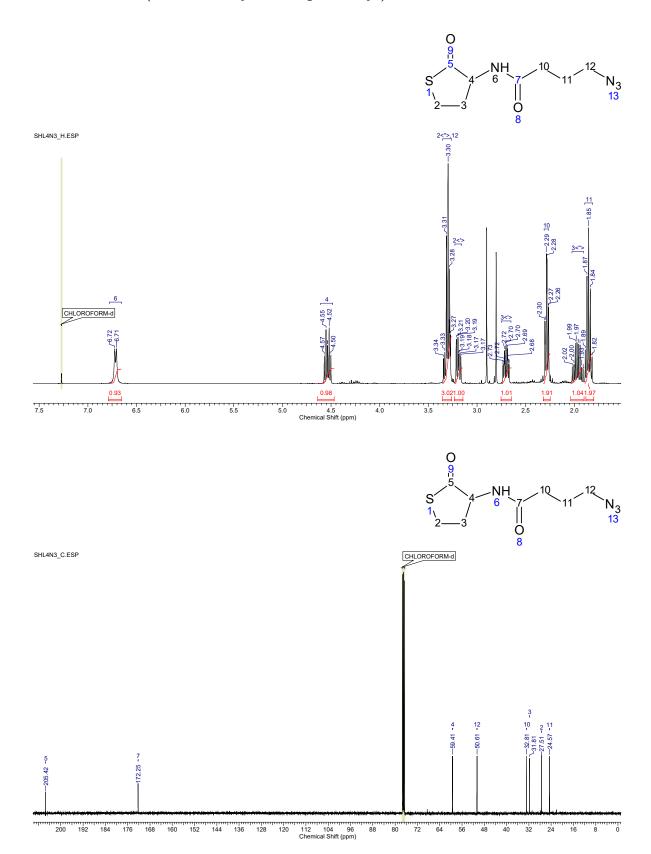
 $1.14 \quad 6\hbox{-}(4\hbox{-}(4\hbox{-}(4\hbox{-}((2,4\hbox{-Diaminopyrimidin-}5\hbox{-yl})\text{methyl})\hbox{-}2,} \\ 6\hbox{-dimethoxyphenoxy}) \\ \text{butyl}) \\ -2, 6\hbox{-dimethoxyphenoxy}) \\ -2, 6\hbox{-dimethoxyphenoxy}) \\ \text{butyl}) \\ -2, 6\hbox{-dimethoxyphenoxy}) \\ -2, 6\hbox{-dimethoxyphenoxy})$ 

3-hydroxyquinolin-4 $(1H)$ -c	dimethoxyphenoxy)bu one 132
<u> </u>	-hydroxyquinolin-4(1 <i>H</i> )-o

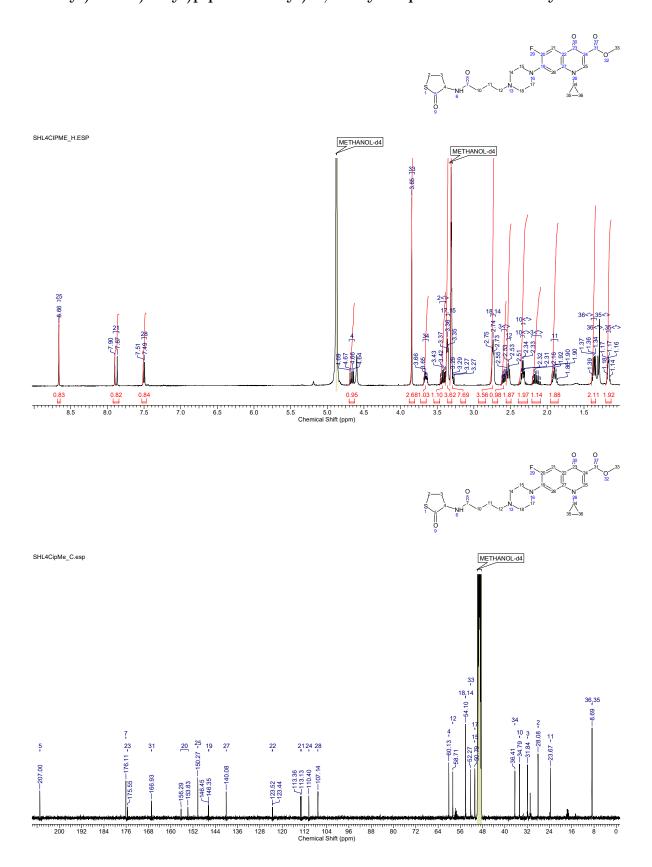
### $1.16\quad \text{4-Bromo-} N\text{-}(2\text{-}oxotetra hydrothiophen-3-yl}) butanamide \ 133$



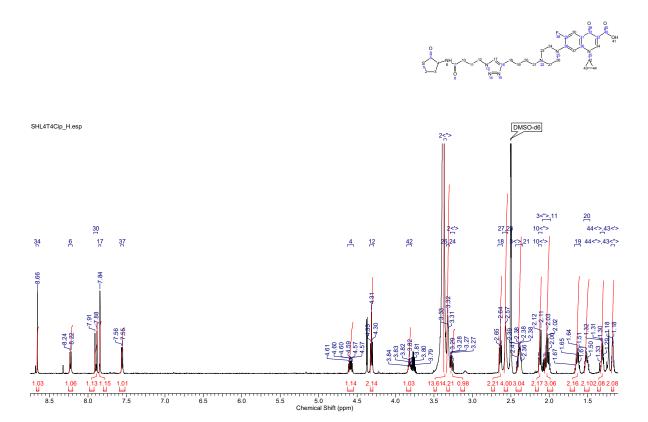
### 1.17 4-Azido-N-(2-oxotetrahydrothiophen-3-yl)butanamide 134

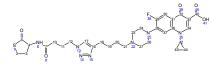


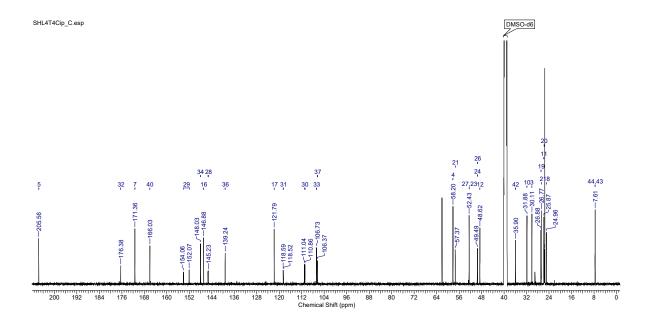
### $1.18 \quad \text{Methyl 1-cyclopropyl-6-fluoro-4-oxo-7-} (4-(4-\text{oxo-4-}((2-\text{oxotetrahydrothiophen-3-yl})\text{amino})\text{butyl}) piperazin-1-yl)-1, 4-dihydroquinoline-3-carboxylate 135$



## $1.19 \quad 1- Cyclopropyl-6-fluoro-4-oxo-7-(4-(4-(1-(4-oxo-4-((2-oxotetrahydrothiophen-3-yl)amino)butyl)-1H-1,2,3-triazol-4-yl)butyl)piperazin-1-yl)-1,4-dihydroquinol-ine-3-carboxylic acid 136$

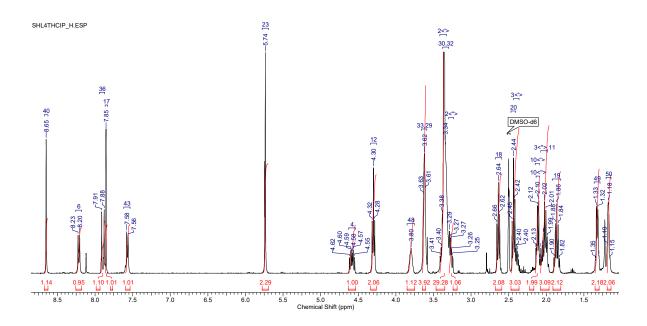


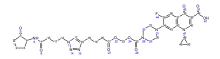


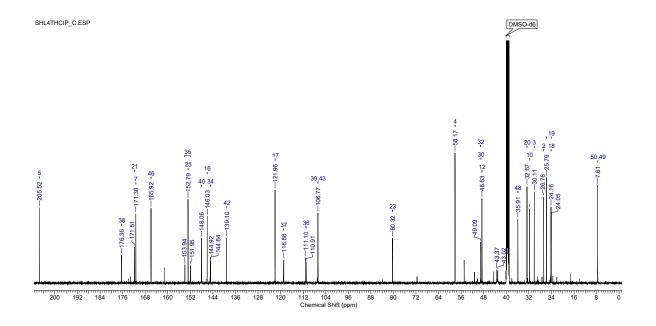


 $1.20 \quad 1- Cyclopropyl-6-fluoro-4-oxo-7-(4-((((4-(1-(4-oxo-4-((2-oxotetrahydrothiophen-3-yl)amino)butyl)-1H-1,2,3-triazol-4-yl)butanoyl)oxy)methoxy)carbonyl)piperazin-1-yl)-1,4-dihydroquinoline-3-carboxylic acid 137$ 

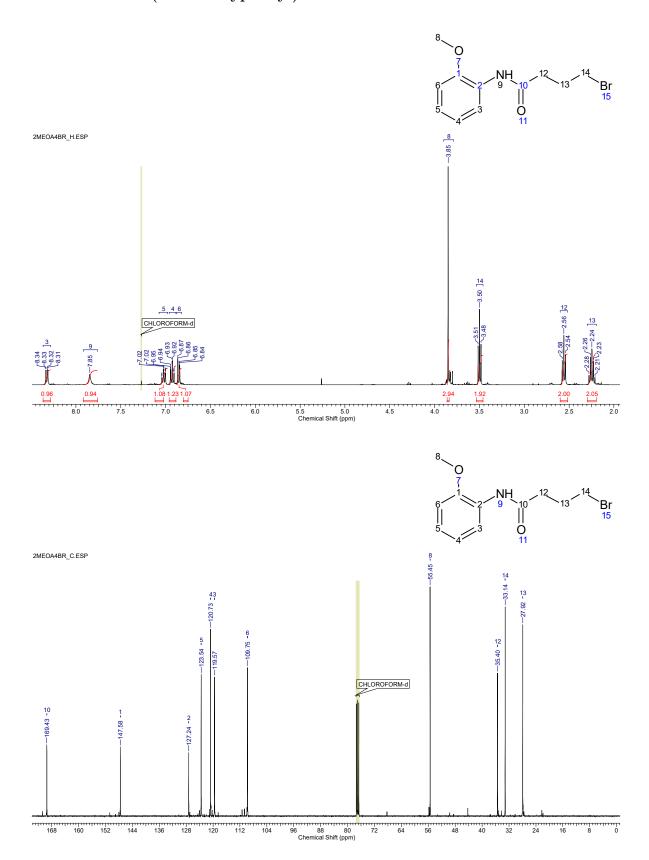




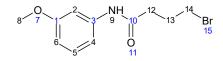


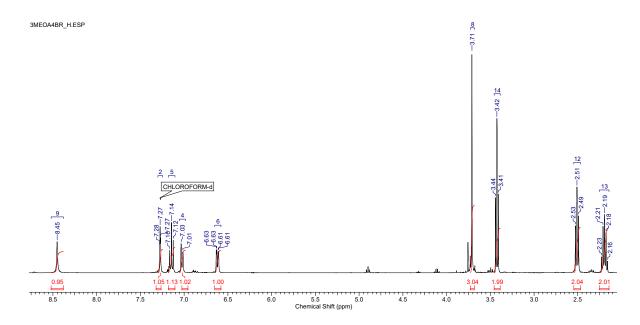


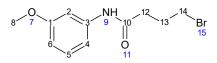
### ${\bf 1.21}\quad {\bf 4\text{-}Bromo-} \textit{N-} ({\bf 2\text{-}methoxyphenyl}) \\ \text{butanamide 139}$

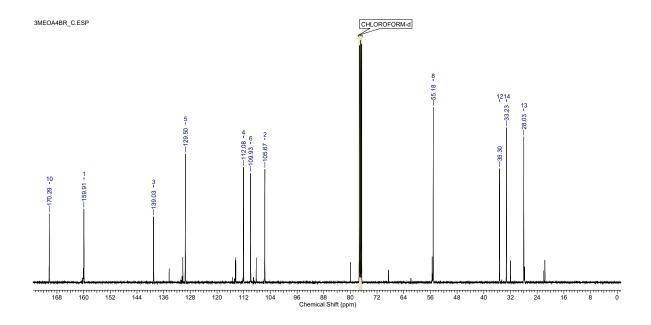


### ${\bf 1.22}\quad {\bf 4\text{-}Bromo-}\textit{N-}({\bf 3\text{-}methoxyphenyl}) \\ {\bf butanamide}\ 140$



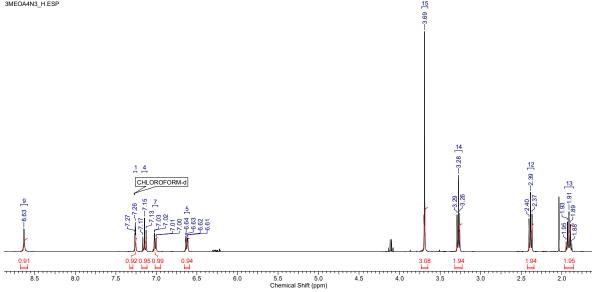


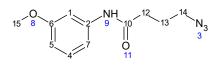


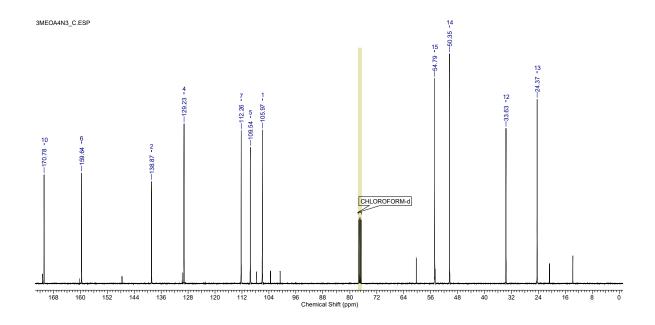


### ${\bf 1.23}\quad {\bf 4\text{-}Azido-} N\text{-}(3\text{-methoxyphenyl}) \\ \text{butanamide } 141$

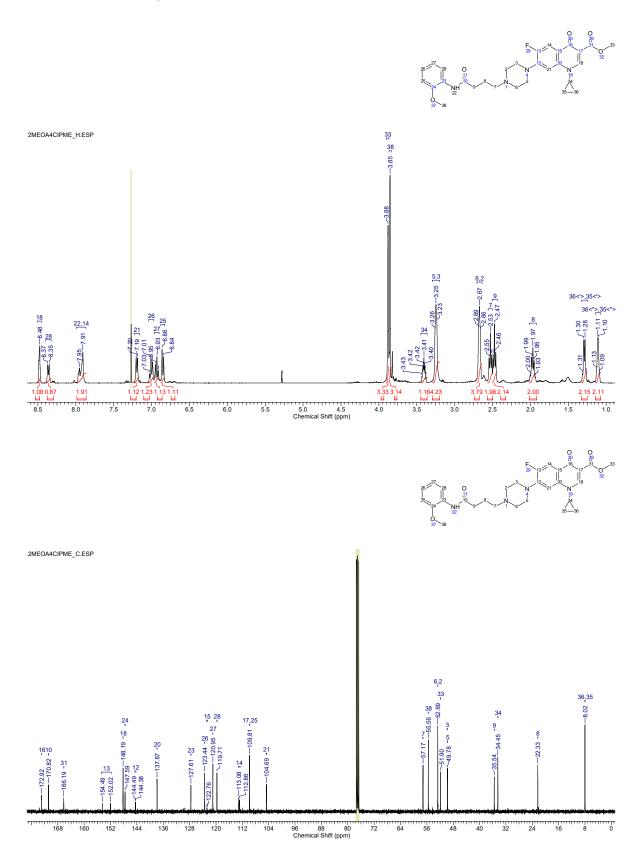




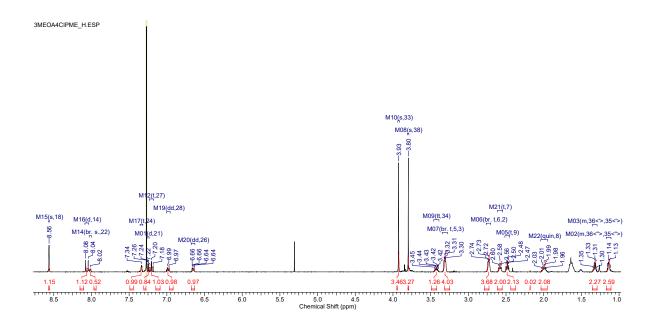


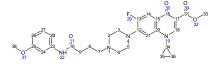


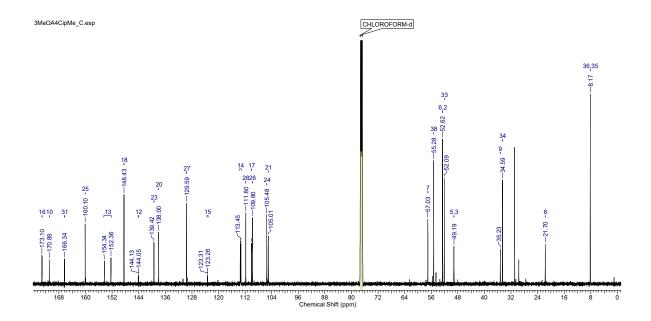
### $1.24 \quad \text{Methyl 1-cyclopropyl-6-fluoro-7-} (4-(4-((2-\text{methoxyphenyl})\text{amino})-4-\text{oxobutyl})-\\ \text{piperazin-1-yl})-4-\text{oxo-1}, 4-\text{dihydroquinoline-3-carboxylate } 142$



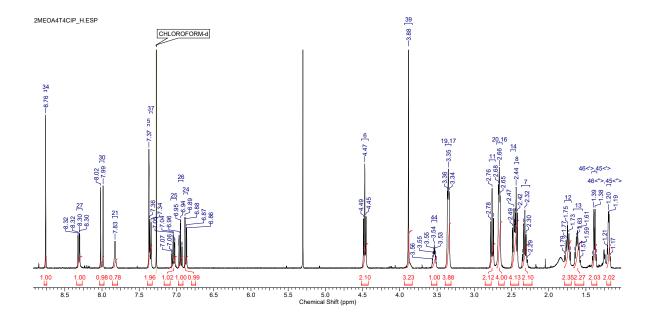
### $1.25 \quad \text{Methyl 1-cyclopropyl-6-fluoro-7-} (4-(4-((3-\text{methoxyphenyl})\text{amino})-4-\text{oxobutyl})-\\ \text{piperazin-1-yl})-4-\text{oxo-1}, 4-\text{dihydroquinoline-3-carboxylate } 143$

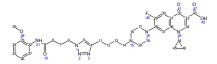


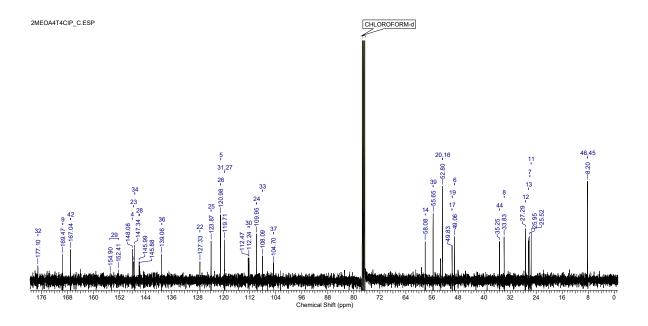




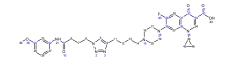
# $1.26 \quad 1- Cyclopropyl-6-fluoro-7-(4-(4-(1-(4-((2-methoxyphenyl)amino)-4-oxobutyl)-1H-1,2,3-triazol-4-yl)butyl)piperazin-1-yl)-4-oxo-1,4-dihydroquinoline-3-carboxylic acid 144$

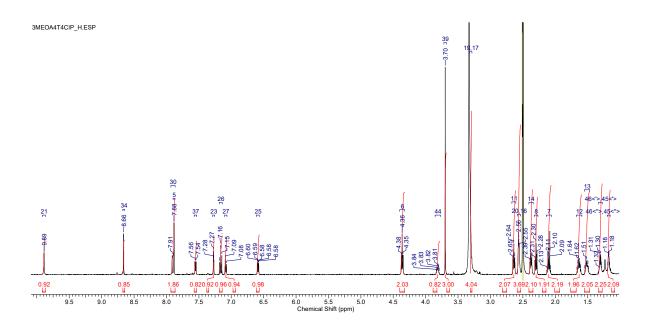


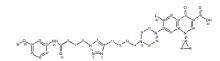


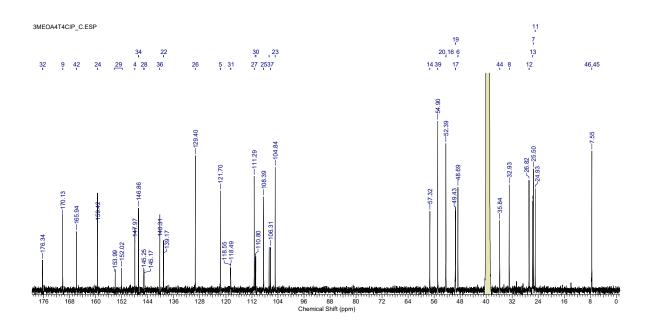


## $1.27 \quad 1- Cyclopropyl-6-fluoro-7-(4-(4-(1-(4-((3-methoxyphenyl)amino)-4-oxobutyl)-1H-1,2,3-triazol-4-yl)butyl)piperazin-1-yl)-4-oxo-1,4-dihydroquinoline-3-carboxylic acid 145$









146

acid salt 147

	4-Chloro- $N$ -((1 $S$ ,2 $S$ )-2-hydroxycyclopentyl)butanamide 148
НОсу5	NH4Cl(SS)_H.pdf
НОсу5	NH4Cl(SS)_C.pdf
1.31	4-Chloro- $N$ -((1 $R$ ,2 $R$ )-2-hydroxycyclopentyl)butanamide 149
НОсу5	NH4Cl(RR)_H.pdf

_

1.	33 4-Azido- $N$ -((1 $S$ ,2 $S$ )-2-hydroxycyclopentyl)butanamide 151
но	Ocy5NH4N3(SS)_H.pdf
но	Ocy5NH4N3(SS)_C.pdf
1.	34 4-Azido- $N$ - $((1R,2R)$ -2-hydroxycyclopentyl)butanamide 152
:1	HOcy5NH4N3(RR)_H.pdf
:I	HOcy5NH4N3(RR)_C.pdf

1.35	$\label{lem:methyl-1-cyclopropyl-6-fluoro-7-(4-(4-(((1S,2S)-2-hydroxycyclopentyl)amino)-4-oxobutyl) piperazin-1-yl)-4-oxo-1,4-dihydroquinoline-3-carboxylate 153}$
H0cy5	NH4CipMe(SS)_H.pdf
НОсу5	NH4CipMe(SS)_C.pdf

HOcy5NH4CipMe(RR)_H.pdf	entyl)amino te 154
HOcy5NH4CipMe(RR)_C.pdf	

Methyl~(R)-1-cyclopropyl-6-fluoro-4-oxo-7-(4-(4-oxo-4-((2-oxocyclopentyl)ambino)butyl) piperazin-1-yl)-1,4-dihydroquinoline-3-carboxylate~155
CipMe(R)_H.pdf
CipMe(R)_C.pdf
<u> </u>

1.3	7-(4-(4-(1-(4-(((1R,2R)-2-((tert-butyldimethylsilyl)oxy)cyclopentyl)amino)-oxobutyl)-1H-1,2,3-triazol-4-yl)butyl)piperazin-1-yl)-1-cyclopropyl-6-fluoro-oxo-1,4-dihydroquinoline-3-carboxylic acid 156
TBS	Ocy5NH4T4Cip(RR)_H.pdf
TBS	Ocy5NH4T4Cip(RR)_C.pdf

HOcy5NH4T4Cip(SS)_H.pdf	
HOcy5NH4T4Cip(SS)_C.pdf	

HOcy5NH4T4Cip(RR)_H.pdf	
HOcy5NH4T4Cip(RR)_C.pdf	

1.41	4-Chloro- $N$ -(( $trans$ )-2-hydroxycyclohexyl)butanamide 159
H0cy6	NH4Cl_H.pdf
H0cy6	NH4Cl_C.pdf
1.42	$4 ext{-Azido-}N ext{-}((trans) ext{-}2 ext{-hydroxycyclohexyl})$ butanamide 160
HOcy6	NH4N3_H.pdf

	late 161
HOcy6NH4CipMe_H.pdf	
HOcy6NH4CipMe_C.pdf	

1.44	Methyl 1-cyclopropyl-6-fluoro-4-oxo-7-(4-(4-oxo-4-((2-oxocyclohexyl)amino)-butyl)piperazin-1-yl)-1,4-dihydroquinoline-3-carboxylate 162
Осу6М	H4CipMe_H.pdf
Осу6М	H4CipMe_C.pdf

1.45	1- Cyclopropyl-6-fluoro-7-(4-(4-(1-(4-(((trans)-2-hydroxycyclohexyl)amino)-4-oxobutyl)-1H-1,2,3-triazol-4-yl) butyl) piperazin-1-yl)-4-oxo-1,4-dihydroquinoline-3-carboxylic acid 163
НОсу6	NH4T4Cip_H.pdf
НОсу6	NH4T4Cip_C.pdf

1.46	1-Cyclopropyl-6-fluoro-4-oxo-7-(4-(4-(1-(4-oxo-4-((2-oxocyclohexyl)amino)but 1H-1,2,3-triazol-4-yl)butyl)piperazin-1-yl)-1,4-dihydroquinoline-3-carboxylic acid 164
Ocy6N	H4T4Cip_H.pdf
Ocy6N	H4T4Cip_C.pdf