Ultrasound assisted synthesis of 4-(benzyloxy)-N-(3-chloro-2-(substitutedphenyl)-4-oxoazetidin-1-yl) benzamide as challenging anti tubercular scaffold

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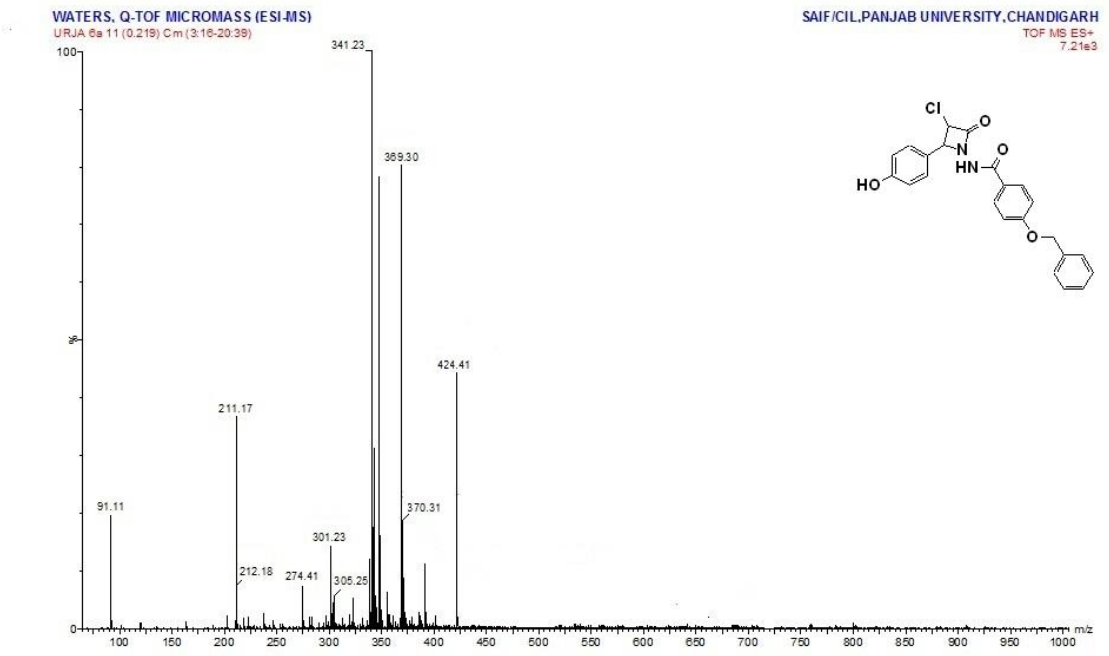
Table S1: Physical characterization of 4-(benzyloxy)-N-(3-chloro-2-(substituted phenyl)-4-oxoazetidin-1-yl) benzamide **6a-j**

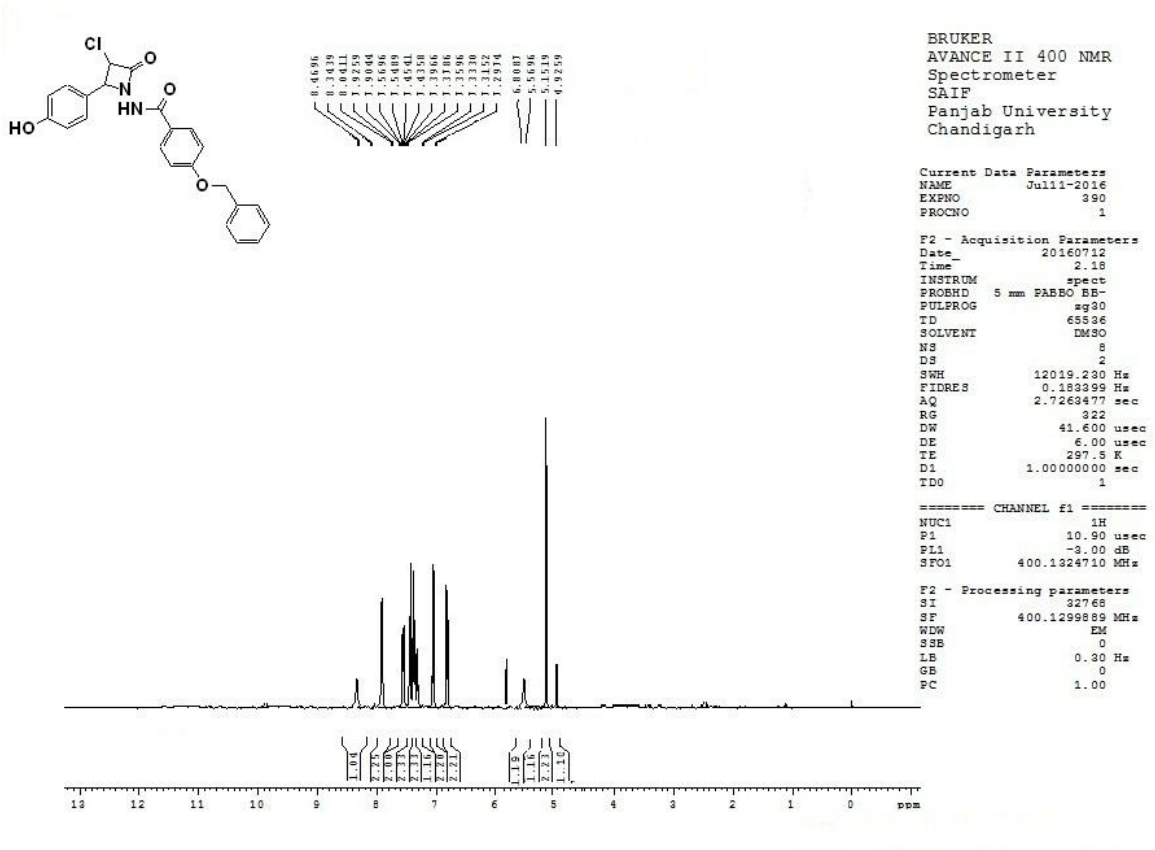
Code No.	Structure	Molecular Formula	Mol. Wt.	Yield (%)	M.P.(˚C)
6a	4-Hydroxyphenyl	$C_{23}H_{19}ClN_2O_4$	422.86	88	175
6b	4-Methoxyphenyl	$C_{24}H_{21}ClN_2O_4$	436.89	82	170
6c	4-Fluorophenyl	$C_{23}H_{18}ClFN_2O_3$	424.85	80	144
6d	4-Chlorophenyl	$C_{23}H_{18}Cl_2N_2O_3$	441.31	79	152
6e	3-Nitrophenyl	$C_{23}H_{18}ClN_3O_5$	451.86	80	198
6f	3,4-Dimethoxyhenyl	$C_{25}H_{23}ClN_2O_5$	466.91	79	182
6g	4-Hydroxy-3-methoxyphenyl	$C_{24}H_{21}ClN_2O_5$	452.89	86	164
6h	3-Ethoxy-4-hydroxyphenyl	$C_{25}H_{23}ClN_2O_5$	466.91	81	156
6i	4-Benzyloxyphenyl	$C_{30}H_{25}ClN_2O_4$	512.98	78	180
6j	Thiophen-2-yl	$C_{21}H_{17}ClN_2O_3S$	412.89	79	172

S2: Mass,[1]HNMR and [13]C NMR and elemental analysis of representative derivatives.

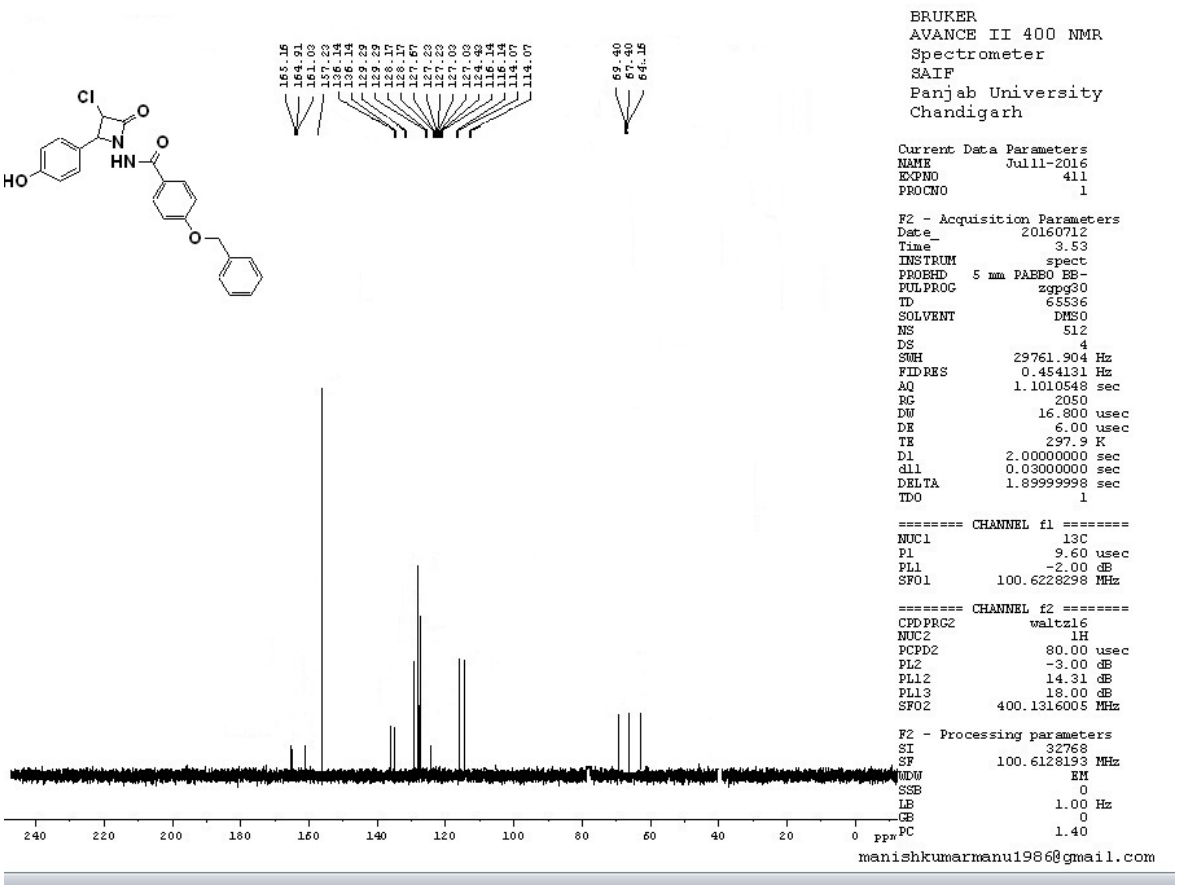
Mass Spectra: 6a) ***4-(benzyloxy)-N-(3-chloro-2-(4-hydroxyphenyl)-4-oxoazetidin-1-yl) benzamide:***



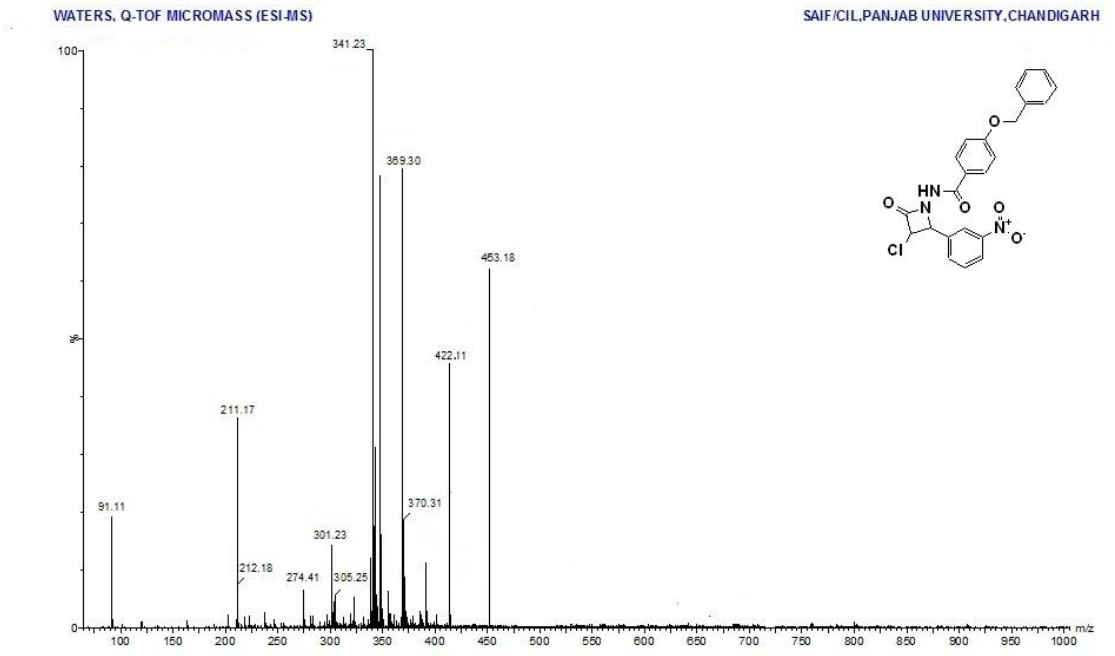
[1]H NMR Spectra: 6a) ***4-(benzyloxy)-N-(3-chloro-2-(4-hydroxyphenyl)-4-oxoazetidin-1-yl) benzamide:***



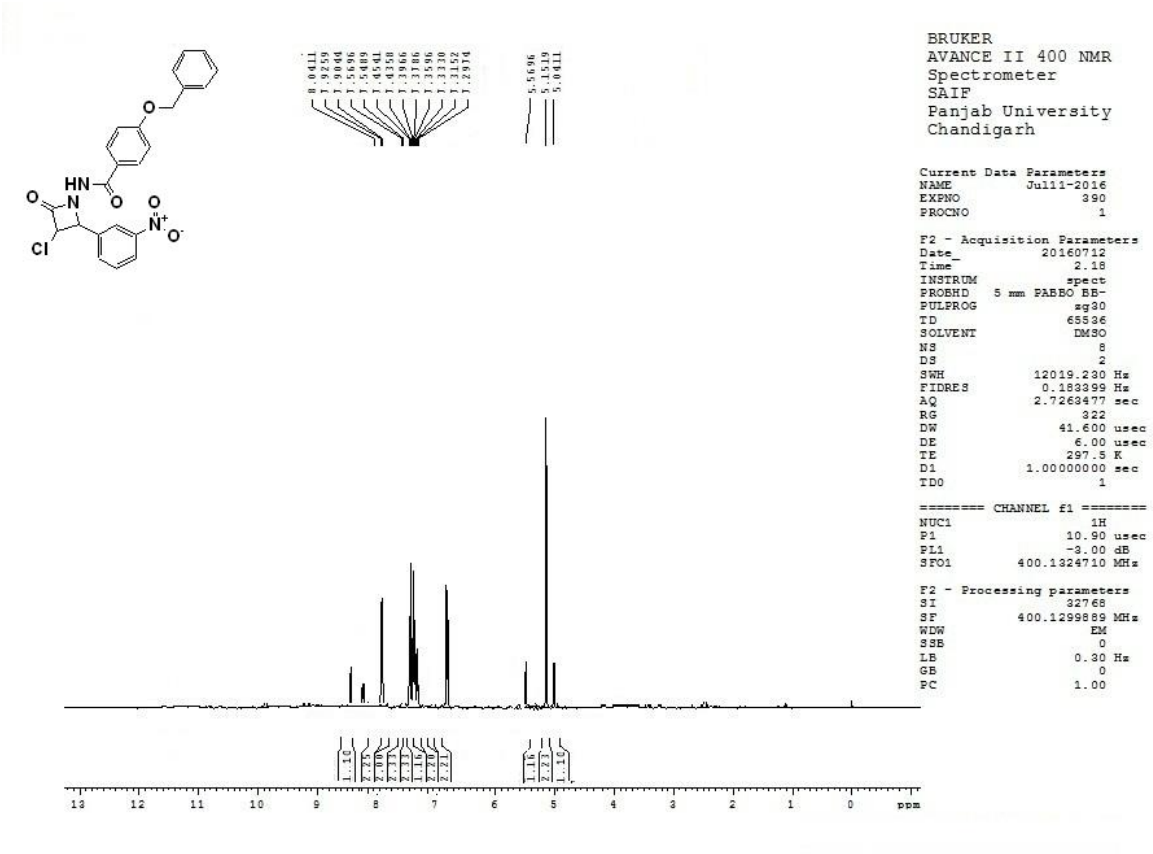
^{13}C NMR Spectra: 6a) ***4-(benzyloxy)-N-(3-chloro-2-(4-hydroxyphenyl)-4-oxoazetidin-1-yl) benzamide:***



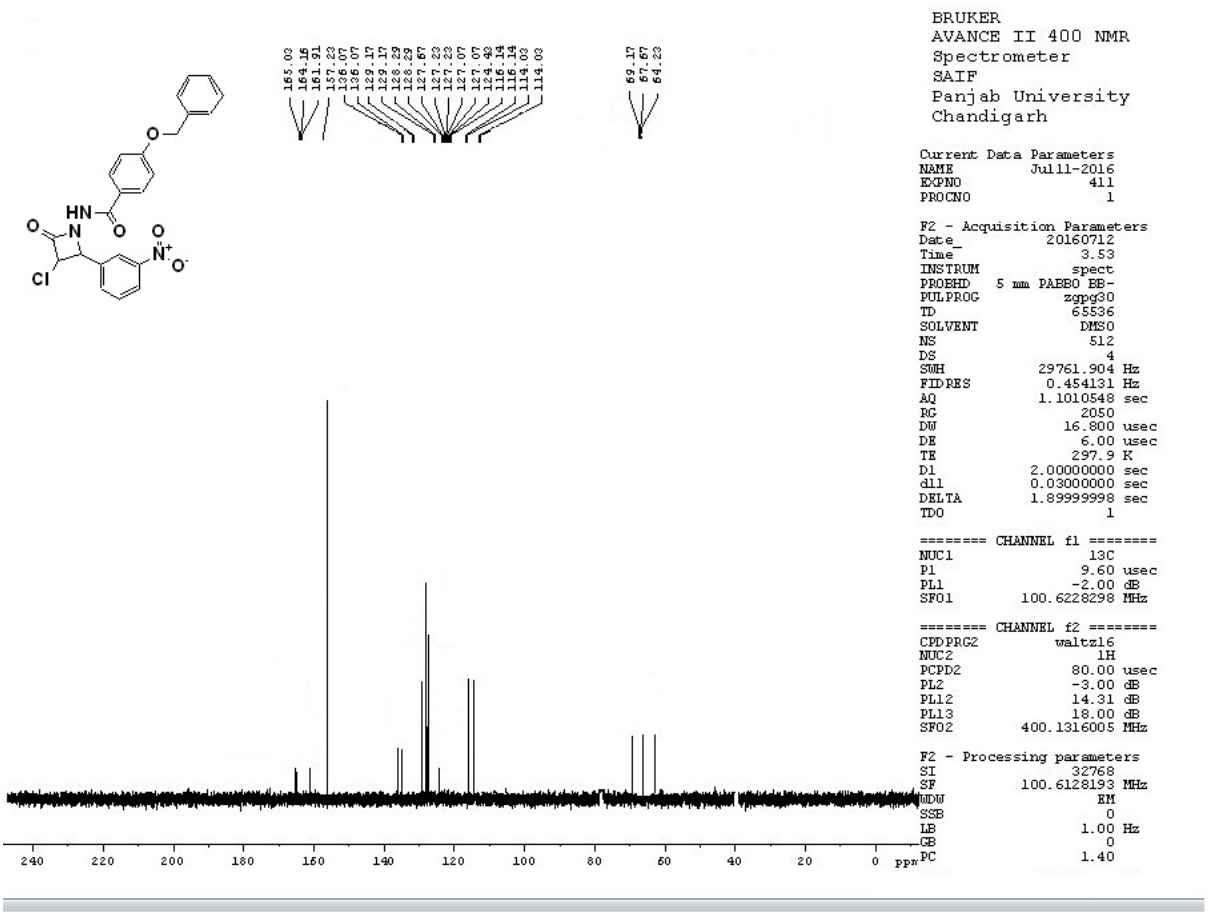
Mass Spectra 6e): ***4-(benzyloxy)-N-(3-chloro-2-(3-nitrophenyl)-4-oxoazetidin-1-yl) benzamide***



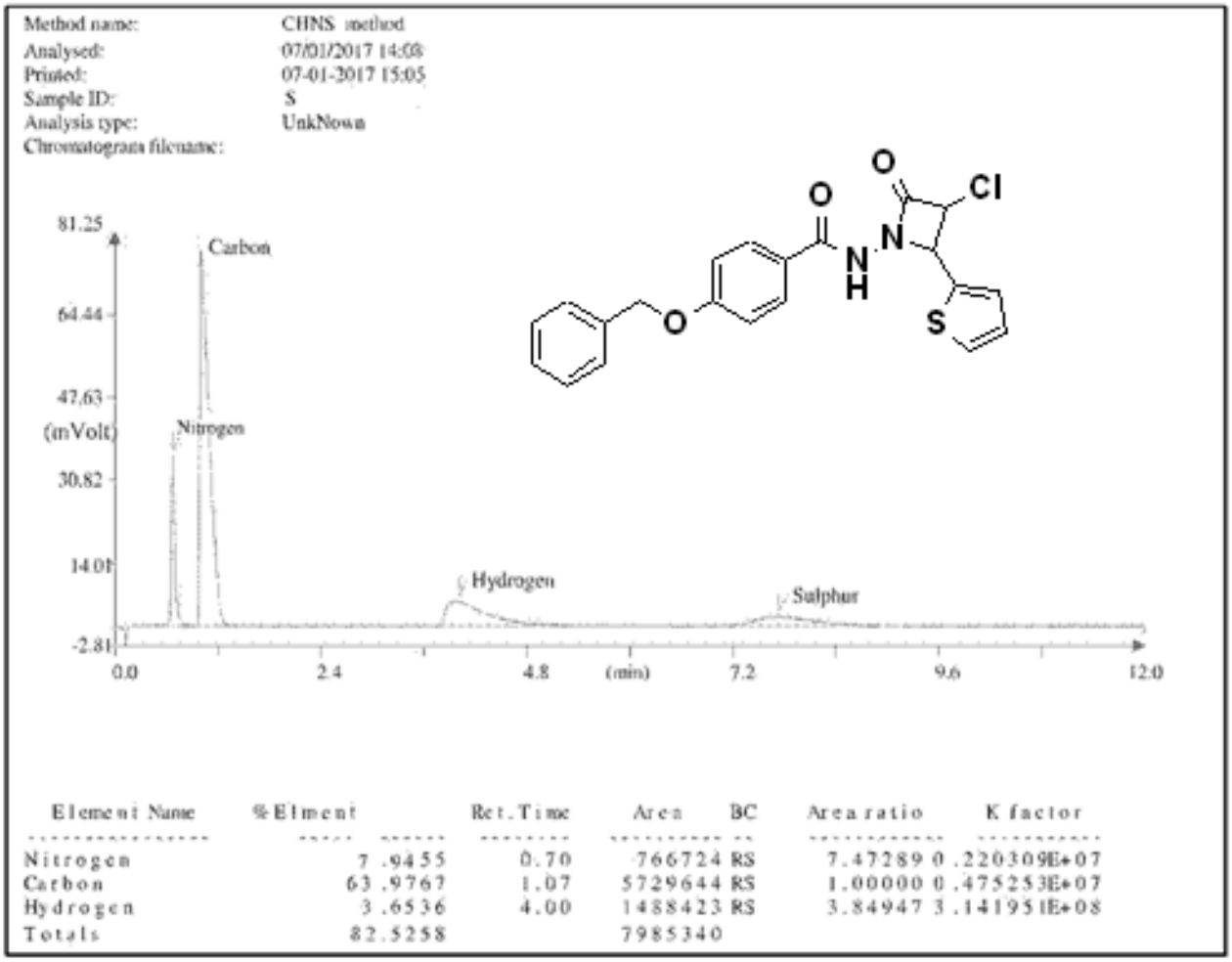
^{1}H NMR Spectra 6e): ***4-(benzyloxy)-N-(3-chloro-2-(3-nitrophenyl)-4-oxoazetidin-1-yl) benzamide***



^{13}C NMR Spectra 6e): ***4-(benzyloxy)-N-(3-chloro-2-(3-nitrophenyl)-4-oxoazetidin-1-yl) benzamide***



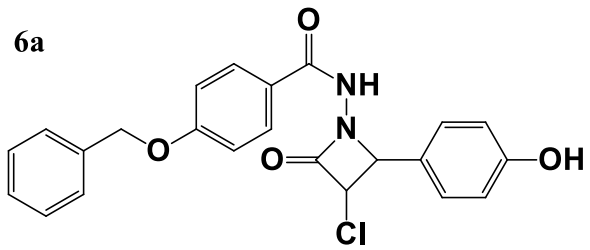
8). Elemental analysis 6j



Element Name	%Element	Ret.Time	Area	BC	Area ratio	K factor
Nitrogen	7.9455	0.70	766724	RS	7.47289	0.220309E+07
Carbon	63.9767	1.07	5729644	RS	1.00000	0.475253E+07
Hydrogen	3.6536	4.00	1488423	RS	3.84947	3.141951E+08
Totals	82.5258		7985340			

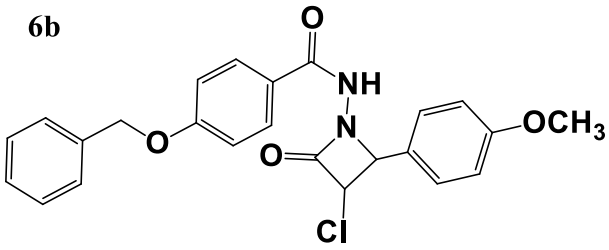
S3: Structures and IUPAC name of synthesised derivatives 6 a-j

6a



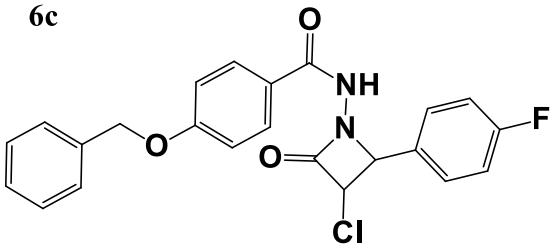
4-(benzyloxy)-*N*-(3-chloro-2-(4-hydroxyphenyl)-4-oxoazetidin-1-yl)benzamide

6b



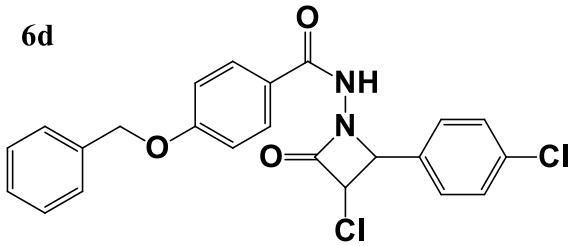
4-(benzyloxy)-*N*-(3-chloro-2-(4-methoxyphenyl)-4-oxoazetidin-1-yl)benzamide

6c



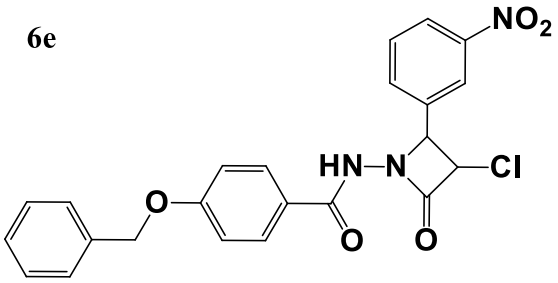
4-(benzyloxy)-*N*-(3-chloro-2-(4-fluorophenyl)-4-oxoazetidin-1-yl)benzamide

6d



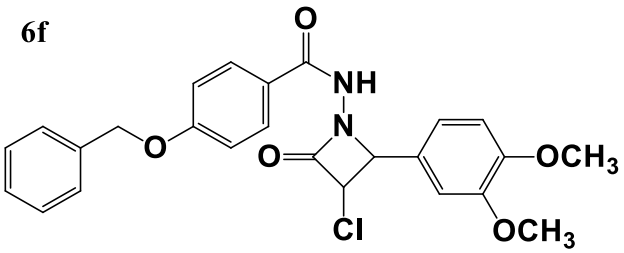
4-(benzyloxy)-*N*-(3-chloro-2-(4-chlorophenyl)-4-oxoazetidin-1-yl)benzamide

6e



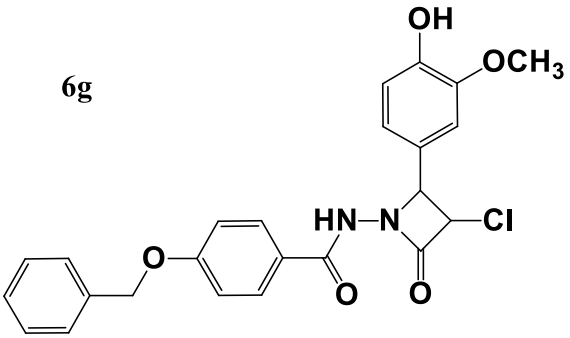
4-(benzyloxy)-*N*-(3-chloro-2-(3-nitrophenyl)-4-oxoazetidin-1-yl)benzamide

6f



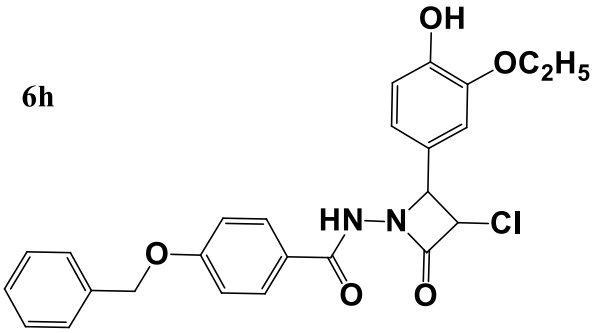
4-(benzyloxy)-*N*-(3-chloro-2-(3,4-dimethoxyphenyl)-4-oxoazetidin-1-yl)benzamide

6g



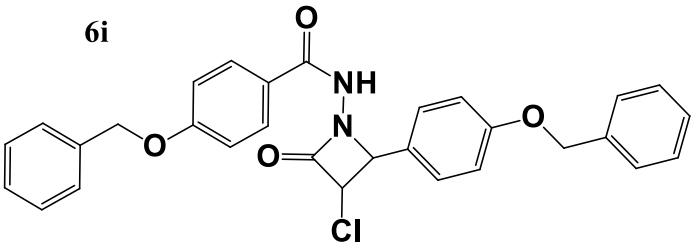
4-(benzyloxy)-*N*-(3-chloro-2-(4-hydroxy-3-methoxyphenyl)-4-oxoazetidin-1-yl)benzamide

6h



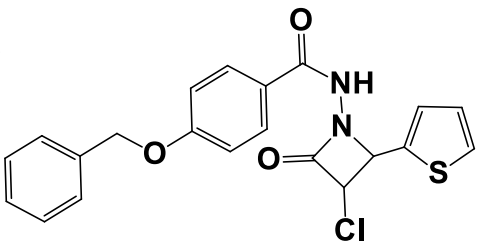
4-(benzyloxy)-*N*-(3-chloro-2-(3-ethoxy-4-hydroxyphenyl)-4-oxoazetidin-1-yl)benzamide

6i



4-(benzyloxy)-*N*-(2-(4-(benzyloxy)phenyl)-3-chloro-4-oxoazetidin-1-yl)benzamide

6j



4-(benzyloxy)-*N*-(3-chloro-2-oxo-4-(thiophen-2-yl)azetidin-1-yl)benzamide