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Synthesis and Spectral Analysis of1H-1,2,3-triazol-1-yl)-N-phenylacetamide Derivatives

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Abstract: A facile and highly efficient synthesis of 4-(4-(2-oxo-5-((prop-2-yn-1-ylamino)methyl)oxazolidin-3-yl)phenyl) morpholin-3-one(Int-02) from 4-(4-aminophenyl)morpholin-3-one and 2-[(2S)-oxiran-2-ylmethyl]-1Hisoindole-1,3(2H)-dione was carried out by multi step reaction. Which was further undergoes reactionwith substituted 2-azido-N-phenylacetamide in the presence of catalytic amount of sodium ascorbate and copper sulphate pentahydratevia click chemistryazide-alkyne cycloaddition reaction to afford various 1H-1,2,3-triazol-1-yl)-N-phenylacetamide Derivatives as final products in good yields. All the synthesized compounds were elucidated by various spectral techniques such as Mass, IR and [1]HNMR.

Keywords: 4-(4-(2-oxo-5-((prop-2-yn-1-ylamino)methyl)oxazolidin-3-yl)phenyl) morpholin-3-one**,** 4-(4-aminophenyl)morpholin-3-one, 2-[(2S)-oxiran-2-ylmethyl]-1Hisoindole-1,3(2H)-dione, click chemistry.

INTRODUCTION:

Over the last two centuries, new approaches to the synthesis of heterocycles have had an extensive impact in the field of both organic and inorganic chemistry. Natural products, alkaloids, renewable resources, agrochemicals, pharmaceuticals, antibiotics and their synthetic substitute and macromolecules often feature heterocyclic substructures. Approaches to the synthesis of these compounds have been evolving constantly from classical condensation procedures to click reactions and new multicomponent reaction procedures. Furthermore, a major research interest has been growing forthe development of new approaches to heterocycle synthesis for green and sustainable chemists.

One of the most important fields of medicinal chemistry is the study of heterocyclic bioactive molecule containing nitrogen atoms[1, 2]. Triazole have been found as a potential heterocyclic component in a wide range of drug scaffolds. It has a five-membered nitrogen heterocycle core with three nitrogen atoms and two carbon atoms. ,The core has a substantial impact on

biological activity[3]. 1,2,3-Triazole, a five-membered heterocyclic ring system, is a very well-known biologically active pharmacophoreconstructed by the copper-catalyzed azide–alkyne cycloaddition (CuAAC) reaction, which is popular as a click chemistry reaction[4]. Click chemistry is the 1,3-dipolar cycloaddition of an azide and alkyne to form1,2,3-triazole, which has been applied for a wide range of applications due toits simple workup and purification steps, rapidly creating new products. Click chemistry holdsexcellent stability because triazole formation is irreversible and quantitative.

Over the last decade, 1,2,3-triazole has become one of the key structural motifs and is used in numerous fields including polymer chemistry[5], material science[6], and drug discovery[7]. 1,2,3-triazole-based molecules display various biological activities such as anti-fungal[8], anti-bacterial[9], anti-tubercular[10], anti-inflammatory[11], anti-allergic[12], anti-HIV[13], anti-cancer[14].

Only a few 1,2,3-triazole-containing hybrids have been developed as therapeutic agents in the medicine industry in recent years, with a wide range of pharmacological applications as anantibiotics. Tazobactam/Ceftolozane[15], Radezolid[16], Cefatrizine[17], imethylsilylspiroaminooxathioledioxide (TSAO)[18],andtheCarboxyamidotriazole (CAI)[19] are examples of pharmaceutical drugs containing 1,2,3-triazoles scaffold.

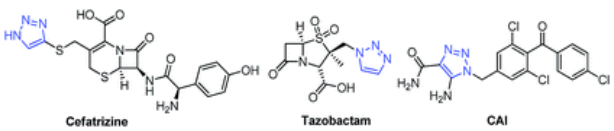


Fig. 1 Structures of Some drugs containing the 1,2,3-triazole unit.

Azole drugs have broad-spectrum activities against most yeasts and filamentous fungi and are mostly used in antifungal chemotherapy.

MATERIALSANDEXPERIMENTAL METHODS :

All the synthetic reactions were carried out by Sigma– Aldrich chemicals. The progress of reactions were monitored by thin-layer chromatography (TLC) on precoated silica gel GF254 plates from E-Merck Co. and developed plates were visualized by exposure to UV light. Melting points of synthesized compounds were measured in open capillary and are found to uncorrected. The IR spectra of compounds were recorded on SHIMADZU-FTIR-8400 spectrophotometer using KBr pellet method and 1H NMR spectra of synthesized compounds were recorded on Bruker 300-MHz NMR spectrometer in DMSO-d6 solvent with tetramethylsilane as an internal standard. Mass spectra were recorded on JOEL SX 102/DA-600-Mass spectrometer.

EXPERIMENTAL:

General synthesis of INT-01(2-chloro-N-phenylacetamide)

A solution of various substituted Aniline (1equi.) in acetone was added withchloroacetyl chloride (1equi.) drop wise and themixture was stirred for about

2-3hrs at Room temperature. Resulting reaction mixture was then pouredinto crushed ice bath. Solid intermediate product was separate out which was filtered and washed with water. It was dried and then used in next step without further purification

General synthesis of INT-02(2-azido-N-phenylacetamide)

To a solution of INT-01(1 equi) in DMF , sodium azide(NaN3) was added(3equi). The resulting mixture was stirred at RT for 24 hr and was monitered by TLC.

After completion of the reaction, the mixture was poured on to crushed ice. Filter the separated product and dry it.

General synthesis of -hydroxy-3-{[4-(3-oxomorpholin-4-yl) phenyl]amino} propyl]-1H-isoindole-1,3(2H)-dione (INT-03)

A suspension of 4-(4-aminophenyl) morpholin-3-one(5, 100 g, 0.52 mol) and 2-[(2S)-oxiran-2-ylmethyl]-1Hisoindole-1,3(2H)-dione (6, 116.2 g, 0.57 mol) in isopropyl alcohol (1,700 mL) and water (300 mL) was refluxed for 8 h. and reaction was monitored by HPLC. After completion of reaction, resulting mass was cooled to 25–30°C, precipitated solid was filtered, washed with isopropyl alcohol (100 mL) and dried the solid under vacuum (650–700 mm/Hg) at 50–55°C for 6h to afford as light yellow to off white colored solid. Yield: 196.8 g (96.0%).

General synthesis (5S)-2-oxo-3-[4-(3-oxomorpholin-4-yl) phenyl]-1,3-oxazolidin-5-yl} methyl)-1H-isoindole-1,3(2H)-dione (INT-04)

N–N-carbonyldiimidazole (CDI) (61.5 g, 0.38 mol) was added to a suspension of Int-03 (100 g, 0.25 mol) in chlorobenzene at 25–30°C. Reaction mixture was maintained at 25–30°C for 5–6 h until completion of the reaction (by HPLC).

Inorganic solid was filtered and washed with dichloromethane (200 mL). Filtrate was collected and concentrated to obtain the residue. The residue was further slurries in tetrahydrofuran (500 mL) at 50–55°C and cooled to 25–30°C, filtered the solid, washed the solid with tetrahydrofuran (50 mL) to furnish it as light yellow to off white solid. Yield: 101.1 g (95.0%)

General synthesisyl)-2-oxo-1,3-oxazolidin-3-yl] phenyl} morpholin-3-one hydrochloride (INT-05)

40% Methylamine solution (102 mL) was added to the solution of 8 (100 g, 0.23 mol) in methanol (1,000 mL) at 25–30°C. Reaction mass was stirred at 60–65°C for 4–6 h (completion of reaction monitored by HPLC). Reaction mass was cooled to 25–30°C, pH of reaction mass was adjusted to 1–2 using concentrated hydrochloric acid, precipitated solid was filtered, and washed with methanol (100 mL) to obtain crude 9.

The obtained crude 9 was dissolved in mixture of methanol (800 mL) and dichloromethane (300 mL) by adjusting the pH 8–9 of reaction using triethylamine at 25–30°C to achieve clear solution. Reaction mass was acidified to pH 2–3

using concentrated hydrochloric acid to precipitate 9. Precipitated solid was filtered, washed with methanol (150 mL) and dried to furnish pure as white solid. Yield: 65.5 g (85.0%)

General synthesis of 4-(4-(2-oxo-5-((prop-2-yn-1-ylamino)methyl) oxazolidin-3-yl)phenyl)morpholin-3-one (InT-06)

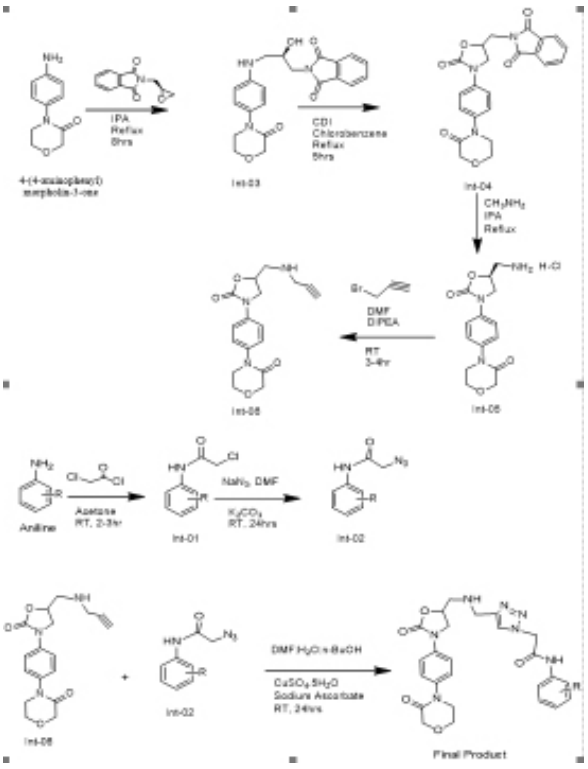
In RBF, Take 4 {4 [(5S) 5 (aminomethyl) 2 oxo 1,3 oxazolidin 3 yl]phenyl} morpholin 3 one hydrochloride (INT-5,50mmol) in acetone (150ml) and added DIPEA(100mmol) with stirring. After 5 min, propagylbromide(55 mmol) was added slowly. After the addition was over, stir the reaction mixture for 3-4 hr. with continuous stirring. The reaction was monitored on TLC. After the completion of the reaction, the reaction mixture was poured into the crushed ice. Extract the RM with MDC two times. Separate the organic layer and dry with sodium sulphate. Evaporate the solvent to yield compound INT-06.

General synthesis of Final Compound (2-(4-(((((2-oxo-3-(4-(3-oxomorpholino)phenyl)oxazolidin-5-yl)methyl)amino)methyl)-1H-1,2,3-triazol-1-yl)-N-phenylacetamide)

In a RBF containing DMF:H2O:n-butanol(1:1:1), INT-2(1 equi), and INT-6(1equi) was added at RT, followed by addition of catalytic amount of sodium Ascorbate and Coppersulphate pentahydrate. Stir the resulting solution for RT for 24hr. after the completion of the reaction, mixture was poured onto the crushed ace and filter the separated product. Was with dilute ammonia and filter the product again. The crude solid was crystallized in ethanol to afford the corresponding pure product. The synthesized compounds were characterized by IR, 1H NMR, and mass spectroscopy.

Reaction Scheme/Synthetic Pathway:

The synthetic pathway for the targeted compounds (V1 to V-10) is shown in Figure-1.4a and Physical parameters of synthesized products are shown in Table-1.



Reaction Scheme: For Synthesis of 1H-1,2,3-triazol-1-yl)-N-phenylacetamide Derivatives

Table-1 Various Synthesized Derivatives and Physical Constants

Compound	M.F	'R' Substituent	M.Wt	M.P ˚C	% YIELD
V1	$C_{25}H_{27}N_7O_5$	H	505	192-196	71
V2	$C_{25}H_{26}ClN_7O_5$	2-Cl	540	193-195	73
V3	$C_{25}H_{26}ClN_7O_5$	4-Cl	540	194-196	68
V4	$C_{25}H_{25}Cl_2N_7O_5$	2,4-dichloro	574	198-200	70
V5	$C_{25}H_{26}FN_7O_5$	2-F	523	196-198	69
V6	$C_{25}H_{26}FN_7O_5$	4-F	523	195-199	72
V7	$C_{25}H_{25}F_2N_7O_5$	2,4-diflouro	541	200-205	69
V8	$C_{26}H_{29}N_7O_6$	4-OCH_3	535	193-196	74
V9	$C_{25}H_{27}N_7O_5$	4-Br	584	194-197	73
V10	$C_{27}H_{31}N_7O_6$	2-CH_3,4-OCH_3	549	192-195	68

SPECTRAL ANALYSIS OF SYNTHESIZED COMPOUNDS:

2-(4-((((2-oxo-3-(4-(3-oxomorpholino) phenyl)oxazolidine-5-yl)methyl) amino)methyl)-1H-1,2,3-triazol-1-yl)-N-phenylacetamide(V1)

Off white solid, M.P. IR(KBr pallet) in CM-3647, 3480(N-H stretching), 3077(Aro C-H stretching), 2328(C=N),2217(-N=N-N Azide), 1735(C=O), 1603(-C=O Amide str),1510(-N-H str), 1456(Aro C=C), 868,759,634(Aro C-H). 1H NMR(DMSO, 400.1 MHz) in δ PPM: 10.45(Singlet, 1H of -CONH-), 7.98(Singlet, 1H -CH of triazole ring), 7.06-7.58(Multiplet, 9H aromatic), 5.29(Singlet, 2H -CH_2), 4.74(triplet, 1H -CH of oxazolidine), 4.19(Singlet, 2H -CH2),4.07-4.12(Triplet, 1H), 3.95-3.97(Triplet, 2H), 3.84-3.86(Doublet,1H geminal,2H-CH_2), 3.68-3.71(Triplet, 2H), 2.86(Singlet, 2H -CH_2), 0.85-0.89(multiplet, 1H -NH). Analytical calculated for Molecular formula C25H27N7O5 is C; 59.40%, H; 5.38%, N; 19.40%, found C; 58.39%, H; 4.35%, N; 17.89%.

N-(2-chlorophenyl)-2-(4-((((2-oxo-3-(4-(3-oxomorpholino)phenyl) oxazolidine-5-yl)methyl)amino) methyl)-1H-1,2,3-triazol-1-yl) acetamide(V2)

Off white solid, IR(KBr pallet) in CM-3678, 3539(N-H stretching -$CONH_2$), 3410(N-H Str -NH-) 2926(Aro C-H stretching), 2333(C=N), 2123(-N=N-N Azide), 1748(C=O of -OCO), 1605(-C=O Amide str), 1403, 1551(Aro C=C), 831,782,661(=C-H bending Aro), 752(-C-Cl). 1H NMR(DMSO, 400.1 MHz) in δ PPM: 10.17(Singlet, 1H of -CONH-), 7.98 (Singlet, 1H -CH), 7.19-7.86(Multiplet, aromatic 8H), 5.34(singlet, 2H -CH_2), 4.73-4.76(triplet, 1H -CH of oxazolidine ring), 4.18(singlet, 2H -CH_2), 4.07-4.12(triplet, 1H geminal proton in oxazolidine), 3.95-3.97(triplet, 2H -CH_2), 3.83-3.85(doublet, 3H), 3.68-3.71(triplet, 2H -CH_2), 2.85(singlet, 2H -CH_2), 0.85-0.89(multiplet, 1H -NH).

Analytical calculated for Molecular formula C25H26ClN7O5 is C; 55.61%, H; 4.65%, N; 18.16%, Cl; 6.57%, O;14.82% found C; 55.39%, H; 4.36%, N; 18.08%, Cl; 6.47%, O;14.79%

N-(4-chlorophenyl)-2-(4-((((2-oxo-3-(4-(3-oxomorpholino)phenyl) oxazolidine-5-yl)methyl)amino) methyl)-1H-1,2,3-triazol-1-yl) acetamide(V3)

Off white solidIR(KBr pallet) in CM-3678, 3539(N-H stretching -$CONH_2$), 3410(N-H Str -NH-) 2926(Aro C-H stretching), 2333(C=N), 2123(-N=N-N Azide), 1748(C=O of -OCO), 1605(-C=O Amide str), 1403, 1551(Aro C=C), 831,782,661(=C-H bending Aro), 752(-C-Cl). 1H NMR(DMSO, 400.1 MHz) in δ PPM: 10.17(Singlet, 1H of -CONH-), 7.98 (Singlet, 1H -CH), 7.19-7.86(Multiplet, aromatic 8H), 5.34(singlet, 2H -CH_2), 4.73-4.76(triplet, 1H -CH of oxazolidine ring), 4.18(singlet, 2H -CH_2), 4.07-4.12(triplet, 1H geminal proton in oxazolidine), 3.95-3.97(triplet, 2H -CH_2), 3.83-3.85(doublet, 3H), 3.68-3.71(triplet, 2H -CH_2), 2.85(singlet, 2H -CH_2), 0.85-0.89(multiplet, 1H -NH). Analytical calculated for Molecular formula C25H26ClN7O5 is C; 55.61%, H; 4.65%, N; 18.16%, Cl; 6.57%, O;14.82% found C; 55.39%, H; 4.36%, N; 18.08%, Cl; 6.47%, O;14.79%

N-(2,4-dichlorophenyl)-2-(4-((((2-oxo-3-(4-(3-oxomorpholino)phenyl) oxazolidine-5-yl)methyl)amino) methyl)-1H-1,2,3-triazol-1-yl) acetamide(V4)

Off white solid, IR(KBr pallet) in CM-3678, 3539(N-H stretching -$CONH_2$), 3410(N-H Str -NH-) 2926(Aro C-H stretching), 2333(C=N), 2123(-N=N-N Azide), 1748(C=O of -OCO), 1605(-C=O Amide str), 1403, 1551(Aro C=C),831,782,661(=C-H bendingAro), 752(-C-Cl).1H NMR(DMSO, 400.1 MHz) in δ PPM: 10.17(Singlet, 1H of -CONH-), 7.98(Singlet, 1H -CH), 7.27-7.91(Multiplet, aromatic 7H), 5.43(singlet, 2H -CH_2), 4.73-4.76(triplet, 1H -CH of oxazolidine ring), 4.18(singlet, 2H -CH_2), 4.07-4.12(triplet, 1H geminal proton in oxazolidine), 3.95-3.97(triplet, 2H -CH_2), 3.83-3.85(doublet, 3H), 3.68-3.71(triplet, 2H -CH_2), 2.85(singlet, 2H -CH_2), 0.85-0.89(multiplet, 1H -NH). Analytical calculated for Molecular formula $C25H25Cl_2N7O5$ is C; 55.36%, H; 4.65%, N; 18.08%, O; 14.08%, Cl; 12.39% found C; 53.39%, H; 4.35%, N; 17.15%, O; 13.93%, Cl; 12.25%.

N-(2-fluorophenyl)-2-(4-((((2-oxo-3-(4-(3-oxomorpholino)phenyl) oxazolidine-5-yl)methyl)amino) methyl)-1H-1,2,3-triazol-1-yl) acetamide(V5)

Off white solid, IR(KBr pallet) in CM-3678, 3539(N-H stretching -$CONH_2$), 3410(N-H Str -NH-) 2926(Aro C-H stretching), 2333(C=N), 2123(-N=N-N Azide), 1748(C=O of -OCO), 1605(-C=O Amide str), 1403, 1551(Aro C=C), 831,782,661(=C-H bending Aro), 1230(-C-F). 1H NMR(DMSO, 400.1 MHz) in δ PPM: 10.23(Singlet, 1H of -CONH-), 7.98 (Singlet, 1H -CH), 7.10-7.91(Multiplet, aromatic 8H), 5.54(singlet, 2H -CH_2), 4.73-4.76(triplet, 1H -CH of oxazolidine ring), 4.18(singlet, 2H -CH_2), 4.07-4.12(triplet, 1H geminal proton in oxazolidine), 3.95-3.97(triplet, 2H -CH_2), 3.83-3.85(doublet, 3H), 3.68-3.71(triplet, 2H -CH_2), 2.85(singlet, 2H -CH_2), 0.85-0.89(multiplet, 1H -NH).

Analytical calculated for Molecular formula C25H26FN7O5 is C; 57.36%, H; 5.01%, N; 18.73%, F; 3.63%, O;15.28% found C; 55.65%, H; 4.87%, N; 18.25%, F; 3.42%, O;14.89% .

N-(4-fluorophenyl)-2-(4-((((2-oxo-3-(4-(3-oxomorpholino)phenyl) oxazolidine-5-yl)methyl)amino) methyl)-1H-1,2,3-triazol-1-yl) acetamide(V6)

Off white solid, IR(KBr pallet) in CM-3678, 3539(N-H stretching -$CONH_2$), 3410(N-H Str -NH-) 2926(Aro C-H stretching), 2333(C=N), 2123(-N=N-N Azide), 1748(C=O of -OCO), 1605(-C=O Amide str), 1403, 1551(Aro C=C), 831,782,661(=C-H bending Aro), 1230(-C-F). 1H NMR(DMSO, 400.1 MHz) in δ PPM: 10.17(Singlet, 1H of -CONH-), 7.98 (Singlet, 1H -CH), 7.19-7.86(Multiplet, aromatic 8H), 5.34(singlet, 2H -CH_2), 4.73-4.76(triplet, 1H -CH of oxazolidine ring), 4.18(singlet, 2H -CH_2), 4.07-4.12(triplet, 1H geminal proton in oxazolidine), 3.95-3.97(triplet, 2H -CH_2), 3.83-3.85(doublet, 3H), 3.68-3.71(triplet, 2H -CH_2), 2.85(singlet, 2H -CH_2), 0.85-0.89(multiplet, 1H -NH). Analytical calculated for Molecular formula C25H26FN7O5 is C; 57.36%, H; 5.01%, N; 18.73%, F; 3.63%, O;15.28% found C; 55.65%, H; 4.87%, N; 18.25%, F; 3.42%, O;14.89%.

N-(2,4-diflourophenyl)-2-(4-((((2-oxo-3-(4-(3-oxomorpholino)phenyl) oxazolidine-5-yl)methyl)amino) methyl)-1H-1,2,3-triazol-1-yl) acetamide(V7)

Off white solid, IR(KBr pallet) in CM-3678, 3539(N-H stretching -$CONH_2$), 3410(N-H Str -NH-) 2926(Aro C-H stretching), 2333(C=N), 2123(-N=N-N Azide), 1748(C=O of -OCO), 1605(-C=O Amide str), 1403, 1551(Aro C=C), 831,782,661(=C-H bending Aro), 1230,1306(-C-F). 1H NMR(DMSO, 400.1 MHz) in δ PPM: 10.27(Singlet, 1H of -CONH-), 7.98 (Singlet, 1H -CH), 7.27-7.98(Multiplet, aromatic 7H), 5.43(singlet, 2H -CH_2), 4.73-4.76(triplet, 1H -CH of oxazolidine ring), 4.18(singlet, 2H -CH_2), 4.07-4.12(triplet, 1H geminal proton in oxazolidine), 3.95-3.97(triplet, 2H -CH_2), 3.83-3.85(doublet, 3H), 3.68-3.71(triplet, 2H -CH_2), 2.85(singlet, 2H -CH_2), 0.85-0.89(multiplet, 1H -NH). Analytical calculated for Molecular formula C25H25F_2N7O5 is C; 55.45%, H; 4.65%, F; 7.02, N; 18.11%, found C; 54.39%, H; 4.45%, F; 6.95%, N; 17.89%.

N-(4-methoxyphenyl)-2-(4-((((2-oxo-3-(4-(3-oxomorpholino)phenyl) oxazolidine-5-yl)methyl)amino) methyl)-1H-1,2,3-triazol-1-yl) acetamide(V8)

Off white solidIR(KBr pallet) in CM-3647, 3480(N-H stretching), 3077(Aro C-H stretching), 2835(-C-H Methoxy str), 2328(C=N), 2217(-N=N-N Azide), 1735(C=O), 1603(-C=O Amide str), 1510(-N-H str), 1456(Aro C=C), 868,759,634(AroC-H). 1HNMR(DMSO, 400.1 MHz) in δ PPM: 10.39(Singlet, 1H of -CONH-), 7.98 (Singlet, 1H -CH), 7.22-7.93(Multiplet, aromatic 8H), 5.34(singlet, 2H -CH_2), 4.73-4.76(triplet, 1H -CH of oxazolidine ring), 4.18(singlet, 2H -CH_2), 4.07-4.12(triplet, 1H geminal proton in oxazolidine), 3.95-3.97(triplet, 2H -CH_2), 3.83-3.85(doublet, 3H), 3.68-3.71(triplet, 2H -CH_2), 2.85(singlet, 2H -CH_2), 0.85-0.89(multiplet, 1H -NH), 3.83 (Singlet, 3H -OCH_3). Analytical calculated for Molecular formula

$C_{26}H_{29}N_7O_6$ is C; 58.31%, H; 5.46%, N; 18.31%, O;17.92% found C; 56.72%, H; 5.25%, N; 18.20%, O;17.42%.

N-(4-bromophenyl)-2-(4-((((2-oxo-3-(4-(3-oxomorpholino)phenyl) oxazolidine-5-yl)methyl)amino) methyl)-1H-1,2,3-triazol-1-yl) acetamide(V9)

Off white solid, IR(KBr pallet) in CM-3678, 3539(N-H stretching -$CONH_2$), 3410(N-H Str -NH-) 2926(Aro C-H stretching), 2333(C=N), 2123(-N=N-N Azide), 1748(C=O of -OCO), 1605(-C=O Amide str), 1403, 1551(Aro C=C), 831,782,661(=C-H bending Aro), 660 (-C-Br). . 1H NMR(DMSO, 400.1 MHz) in δ PPM: 10.17(Singlet, 1H of -CONH-), 7.98 (Singlet, 1H -CH), 7.19-7.86(Multiplet, aromatic 8H), 5.34(singlet, 2H -CH_2), 4.73-4.76(triplet, 1H -CH of oxazolidine ring), 4.18(singlet, 2H -CH_2), 4.07-4.12(triplet, 1H geminal proton in oxazolidine), 3.95-3.97(triplet, 2H -CH_2), 3.83-3.85(doublet, 3H), 3.68-3.71(triplet, 2H -CH_2), 2.85(singlet, 2H -CH_2), 0.85-0.89(multiplet, 1H -NH). Analytical calculated for Molecular formula $C_{25}H_{26}BrN_7O_5$ isC; 51.38%, H; 4.48%, N; 16.78%, Br; 13.67%, O;13.69% found C; 50.95%, H; 4.87%, N; 16.48%, Br; 13.52%, O;13.89%.

N-(4-methoxy-2-methylphenyl)-2-(4-((((2-oxo-3-(4-(3-oxomorpholino) phenyl)oxazolidine-5-yl)methyl) amino)methyl)-1H-1,2,3-triazol-1-yl) acetamide(V10)

Off white solid, IR(KBr pallet) in CM-3678, 3539(N-H stretching -$CONH_2$), 3410(N-H Str -NH-) 2926(Aro C-H stretching), 2333(C=N), 2123(-N=N-N Azide), 1748(C=O of -OCO), 1605(-C=O Amide str), 1403, 1551(Aro C=C), 831,782,661(=C-H bending Aro), 960 (-O-C str). 1H NMR(DMSO, 400.1 MHz) in δ PPM: 10.23(Singlet, 1H of -CONH-), 7.68 (Singlet, 1H -CH), 7.23-7.58(Multiplet, aromatic 7H), 5.63(singlet, 2H -CH_2), 4.74-4.79(triplet, 1H -CH of oxazolidine ring), 4.31(singlet, 2H -CH_2), 4.07-4.12(triplet, 1H geminal proton in oxazolidine), 3.95-3.97(triplet, 2H -CH_2), 3.80-3.83(doublet, 3H), 3.55-3.57(triplet, 2H -CH_2),3.81(singlet, 2H -CH_2NH), 3.83(Singlet , 3H -OCH_3), 2.06(Singlet, 3H -CH_3), 0.85-0.89(multiplet, 1H -NH). Analytical calculated for Molecular formula $C_{25}H_{31}N_7O_6$ is C; 59.01%, H; 5.69%, N; 17.84%, O;17.47% found C; 58.95%, H; 5.74%, N; 17.76%, O;17.55%.

RESULTS AND DISCUSSION:

All the triazole derivatives were synthesized in simple way and in moderate to high yield. Newly produced compounds were characterized by some physical properties and spectral Analysissuch as IR, NMR and Mass Spectra and structures were confirmed.

CONCLUSION:

The synthesis of various substituted via click chemistry approach was carried out satisfactorily. The developed compounds were well characterized by various spectral techniques as well as elemental analysis. Physical constants were determined by capillary tube. The current synthetic method exhibited numerous advantages such as milder reaction conditions, good to excellent product yields, minimal chemical waste, operational simplicity and shorter reaction time.

CONFLICTS OF INTEREST:

There is no conflicts of interest

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