[004] Due to its extensive pathogenic significance, MYC is an important anticancer target. Deregulated Myc gene is found in a wide range of human hematological malignancies and solid tumors, especially in breast cancer, ovarian carcinoma, acute myeloid leukemia, chronic myelogenous leukemia, Hodgkin's and Burkitt's lymphoma, diffuse large Bcell lymphoma, prostate cancer, colon cancer, gastric cancer, primary central nervous system lymphoma, glioblastoma, medulloblastoma, melanoma, non-small cell lung carcinoma, germinal center-derived lymphomas, esophageal squamous cell carcinoma, osteosarcoma, bladder cancer, pancreatic cancer and lung adenocarcinoma. Recent studies also indicate that deregulation of c-MYC is related to the occurrence of BRAF V600E thyroid cancers, choroid plexus carcinoma, and colitis-associated cancer. In addition, amplification of the MYC gene was found in a significant number of epithelial ovarian cancer cases. In TCGA datasets, the amplification of Myc occurs in several cancer types, including breast, colorectal, pancreatic, gastric, and uterine cancers.

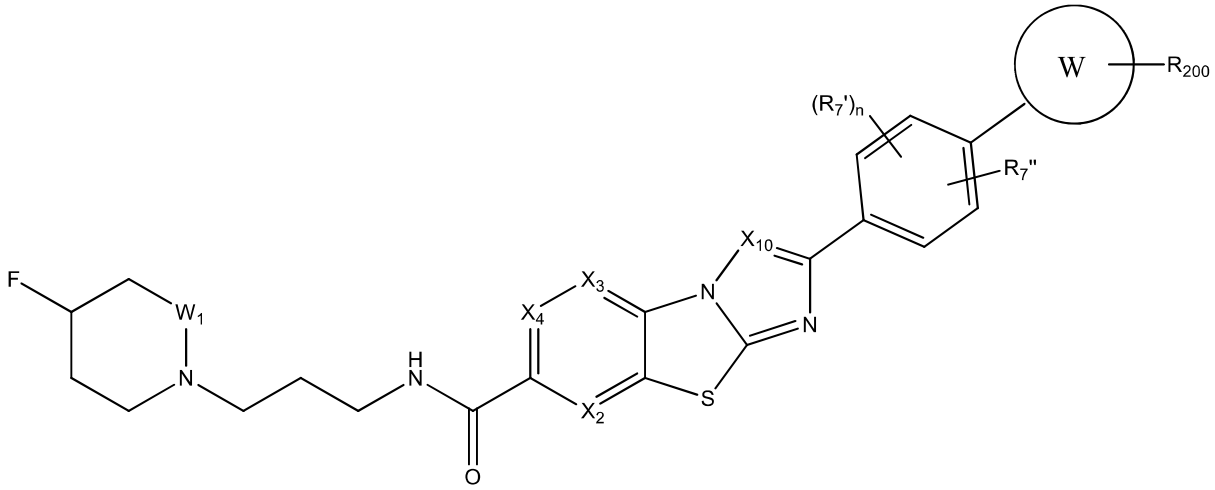
[005] Although Myc gene is a very important oncogene and considered as a driver in carcinogenesis and MYC protein is a key transcription factor broadly targeting various genes, rational designing a direct Myc inhibitor is still challenging. This is mainly because MYC protein lacks structural regions amenable to therapeutic inhibition by small molecules and is considered an undruggable target [BioDrugs (**2019**) 33:539–553].

[006] Designing and developing MYC modulators is challenging, primarily because the MYC protein has a disordered structure which lacks a pocket or groove that can act as a binding site for modulators. Interfering with the MYC transcription, blocking the protein–protein interaction (PPI) of MYC and its cofactors, and influencing on signaling pathways related to MYC were used in the past as potential modulatory targets, but failed to be developed as drug candidates. Myc PPI inhibitors failed to show sufficinet efficacy in cell-based assays and animal models due to the requirement of high target occupancy to drive efficacy. Modulators of signaling pathways upstream to myc, for example mTOR modulators, failed due to lack of target specificity.

[007] Nevertheless, a therapeutic approach to target c-Myc has remained elusive. The absence of a clear ligand-binding domain establishes a formidable obstacle toward direct inhibition, which is a challenging feature shared among many compelling transcriptional targets in cancer. Thus, alternative modalities that target Myc are required, as outlined herein, namely compounds which regulate Myc mRNA translation.

SUMMARY

[007a] In an aspect, there is provided a compound represented by the structure of formula **I(j):**



I(j)

wherein

X_2, **X_3**, and **X_4**, are each independently nitrogen or CH;

X_{10} is N, CH, or C(R) (e.g., $C(CH_2)OH$, $C(CH_2)_2OH$, C(NH-CH_2-cyclopropyl), $C(CH_3)$, C(cyclopropyl), C(isopropoxy), C(COOH));

Ring W is a 3-10 membered single, fused, bridged or spiro, saturated, unsaturated or aromatic, carbocyclic or heterocyclic ring (e.g., morpholine (2 or 3-morpholine), tetrahydrofuran, tetrahydropyran, oxetane, pyrrolidine, pyrrolidin-2-one, pyrrolidin-3-one, imidazole, pyrazole, isoxazolidine, piperazine, piperidine, piperidine-2-one, oxadiazole, triazole, 2-oxopyrrolidine, cyclopropyl, 2,2-dimethylpyrrolidine, 4-azaspiro[2.4]heptane, pyrrolidin-3-one-O-methyloxime, 2-oxa-5-azaspiro[3.4]octane, 1,4-dioxa-6-azaspiro[4.4]nonane, 3,3-dimethylmorpholine, 1-methylpiperazine, 4,7-diazaspiro[2.5]octane, bicyclo[1.1.1]pentane, 2,5-diazabicyclo[2.2.1]heptane, piperazine, piperazine-2-one);

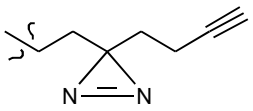
W_1 is CH_2, C=O or CH(**R_{10}**) (e.g., $CHCH_3$);

R_7' and **R_7''** are each independently H, F, Cl, Br, I, OH, O-R_{20}, SH, R_8-OH, R_8-SH, -R_8-O-R_{10}, R_8-(C_3-C_8 cycloalkyl), R_8-(3-8 membered heterocyclic ring), CF_3, CD_3, OCD_3, CN, NO_2, -CH_2CN, -R_8CN, NH_2, NHR, $N(R)_2$, $NH(R_{10})$, $N(R_{10})(R_{11})$, R_8-$N(R_{10})(R_{11})$, R_9-R_8-$N(R_{10})(R_{11})$, $B(OH)_2$, -$OC(O)CF_3$, -OCH_2Ph, NHC(O)-R_{10}, NHCO-$N(R_{10})(R_{11})$, COOH, -C(O)Ph, C(O)O-R_{10}, R_8-C(O)-R_{10}, C(O)H, C(O)-R_{10}, C_1-C_5 linear or branched C(O)-haloalkyl, -$C(O)NH_2$, C(O)NHR, $C(O)N(R_{10})(R_{11})$, SO_2R, $SO_2N(R_{10})(R_{11})$, $CH(CF_3)(NH\text{-}R_{10})$, C_1-C_5 linear or branched, substituted or unsubstituted alkyl (e.g., isopropyl, methyl, ethyl), C_1-C_5 linear or branched, substituted or unsubstituted alkenyl, C_1-C_5 linear or branched, or C_3-C_8 cyclic haloalkyl (e.g., CHF_2), C_1-C_5 linear or branched, or C_3-C_8 cyclic alkoxy (e.g. methoxy), optionally wherein at least one methylene group (CH_2) in the alkoxy is replaced with an oxygen atom, C_1-C_5 linear or branched thioalkoxy, C_1-C_5 linear or branched haloalkoxy, C_1-C_5 linear or branched alkoxyalkyl, substituted or unsubstituted C_3-C_8 cycloalkyl (e.g., cyclopropyl, cyclohexyl), substituted or unsubstituted 3-8 membered heterocyclic ring (e.g., morpholine, pyran, oxetane, pyrrolidine, 3,3-difluoropyrrolidine, imidazole, pyrazole, triazole, piperazine, piperidine,

piperidin-2-one, piperidin-4-ol, dioxazole, 2-oxopyrrolidine), substituted or unsubstituted aryl, substituted or unsubstituted benzyl;

or **R_7'** and **R_7''** are joined to form a 3-8 membered substituted or unsubstituted, saturated, unsaturated or aromatic, carbocyclic or heterocyclic ring (e.g., cyclopentyl, cyclohexyl, piperidine, tetrahydrofuran, tetrahydropyran, pyrrolidine);

R_{20} is represented by the following structure:



R is H, F, Cl, Br, I, OH, SH, alkoxy, $NH(R_{10})$, NH-CH_2-cyclopropyl, $N(R_{10})(R_{11})$, CF_3, CN, NO_2, COOH, C_1-C_5 linear or branched, substituted or unsubstituted alkyl (e.g., methyl, ethyl, CH_2-OH, CH_2-CH_2-OH, CH_2-CH_2-O-CH_2-CH_2-O-CH_3, CH_2-O-CH_2-CH_2-O-CH_3), C_3-C_8 substituted or unsubstituted cycloalkyl, cyclopropyl, C_1-C_5 linear or branched alkoxy, isopropoxy, C_1-C_5 linear or branched haloalkyl (e.g., CHF_2, CF_3, CF_2CH_3, CH_2CF_3, $CF_2CH_2CH_3$, $CH_2CH_2CF_3$, $CF_2CH(CH_3)_2$,$CF(CH_3)$-$CH(CH_3)_2$), R_8-aryl (e.g., CH_2-Ph), -R_8-O-R_8-O-R_{10} (e.g. $(CH_2)_2$-O-$(CH_2)_2$-O-CH_3), -R_8-O-R_{10} (CH_2-OH, CH_2-CH_2-OH), -R_8-R_{10} (e.g., $(CH_2)_2$-O-CH_3), substituted or unsubstituted aryl (e.g., phenyl), substituted or unsubstituted heteroaryl (e.g., pyridine (2, 3, and 4-pyridine);

R_{30} is H, **R_{20}**, F, Cl, Br, I, OH, SH, alkoxy, $N(R)_2$, $NH(R_{10})$, $N(R_{10})(R_{11})$, CF_3, CN, NO_2, C_1-C_5 linear or branched, substituted or unsubstituted alkyl (e.g., methyl, ethyl, CH_2-CH_2-O-CH_2-CH_2-O-CH_3, CH_2-O-CH_2-CH_2-O-CH_3), C_1-C_5 linear or branched alkoxy, C_1-C_5 linear or branched haloalkyl (e.g., CHF_2, CF_3, CF_2CH_3, CH_2CF_3, $CF_2CH_2CH_3$, $CH_2CH_2CF_3$, $CF_2CH(CH_3)_2$,$CF(CH_3)$-$CH(CH_3)_2$), R_8-aryl (e.g., CH_2-Ph), -R_8-O-R_8-O-R_{10} (e.g. $(CH_2)_2$-O-$(CH_2)_2$-O-CH_3), -R_8-O-R_{10}, -R_8-R_{10} (e.g., $(CH_2)_2$-O-CH_3), substituted or unsubstituted aryl (e.g., phenyl), substituted or unsubstituted heteroaryl (e.g., pyridine (2, 3, and 4-pyridine);

R_{200} is H, **R_{20}**, F, Cl, Br, I, OH, SH, alkoxy, NH_2, $N(R)_2$, $NH(R_{10})$, $N(R_{10})(R_{11})$, CF_3, CN, NO_2, C_1-C_5 linear or branched, substituted or unsubstituted alkyl (e.g., methyl, ethyl, CH_2-CH_2-O-CH_2-CH_2-O-CH_3, CH_2-O-CH_2-CH_2-O-CH_3), C_1-C_5 linear or branched alkoxy (e.g., methoxy), C_1-C_5 linear or branched haloalkyl (e.g., CHF_2, CF_3, CF_2CH_3, CH_2CF_3, $CF_2CH_2CH_3$, $CH_2CH_2CF_3$, $CF_2CH(CH_3)_2$,$CF(CH_3)$-$CH(CH_3)_2$), R_8-aryl (e.g., CH_2-Ph), -R_8-O-R_8-O-R_{10} (e.g. $(CH_2)_2$-O-$(CH_2)_2$-O-CH_3), -R_8-O-R_{10}, -R_8-R_{10} (e.g., $(CH_2)_2$-O-CH_3), substituted or unsubstituted aryl (e.g., phenyl), substituted or unsubstituted heteroaryl (e.g., pyridine (2, 3, and 4-pyridine);

or **R_{200}** and the carbon atom to which it is connected are C=O, C=N-O(R) (e.g, C=N-O-CH_3) or $C(R)_2$ (e.g., $C(CH_3)_2$, CF_2);

each **R_8** is independently $[\mathbf{CH_2}]_p$

wherein **p** is between 1 and 10;

R_9 is $[CH]_q$, $[C]_q$

wherein **q** is between 2 and 10;

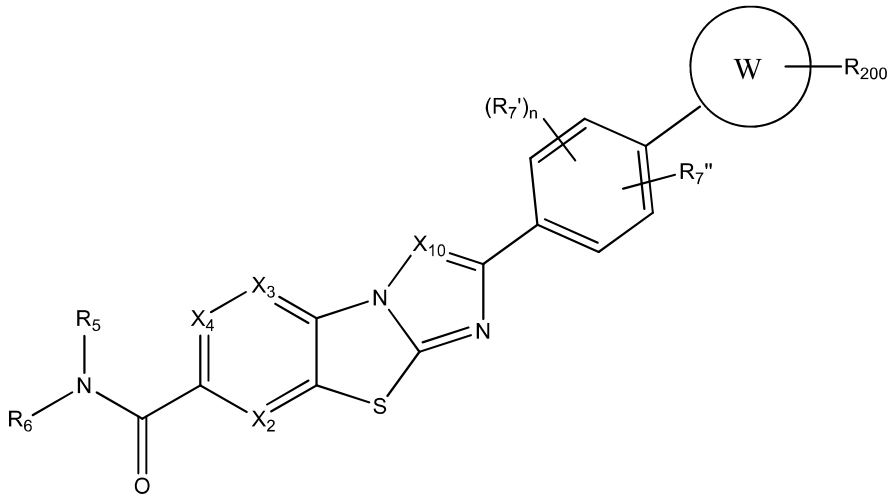
R_{10} and **R_{11}** are each independently H, C_1-C_5 substituted or unsubstituted linear or branched alkyl (e.g., methyl, ethyl, CH_2-cyclopropyl, CH_2-CH_2-O-CH_3), C_1-C_5 substituted or unsubstituted linear or branched haloalky (e.g., CH_2CF_3), C_1-C_5 linear or branched alkoxy (e.g., O-CH_3), **R_{20}**, C(O)R, or $S(O)_2R$;

or **R_{10}** and **R_{11}** are joined to form a substituted or unsubstituted 3-8 membered heterocyclic ring (e.g., piperazine, piperidine),

n is an integer between 0 and 4 (e.g., 1, 2);

or its pharmaceutically acceptable salt, stereoisomer, tautomer, hydrate, *N*-oxide, reverse amide analog, prodrug, isotopic variant (e.g., deuterated analog), PROTAC, pharmaceutical product or any combination thereof.

[007b] In another aspect, there is provided a compound represented by the structure of formula **I(n):**



I(n)

wherein

X_2, **X_3**, and **X_4**, are each independently nitrogen or CH;

X_{10} is N, CH, or C(R) (e.g., $C(CH_2)OH$, $C(CH_2)_2OH$, C(NH-CH_2-cyclopropyl), $C(CH_3)$, C(cyclopropyl), C(isopropoxy), C(COOH));

Ring W is a 3-10 membered single, fused, bridged or spiro, saturated, unsaturated or aromatic, carbocyclic or heterocyclic ring (e.g., morpholine (2 or 3-morpholine), tetrahydrofuran, tetrahydropyran, oxetane, pyrrolidine, pyrrolidin-2-one, pyrrolidin-3-one, pyrrolidinone, imidazole, pyrazole, isoxazolidine, piperazine, piperidine, piperidine-2-one, oxadiazole, triazole, 2-oxopyrrolidine, cyclopropyl, 4-azaspiro[2.4]heptane, pyrrolidin-3-one-O-methyloxime, 2-oxa-5-azaspiro[3.4]octane, 1,4-dioxa-6-azaspiro[4.4]nonane, 4,7-diazaspiro[2.5]octane, bicyclo[1.1.1]pentane, 2,5-diazabicyclo[2.2.1]heptane, piperazine, piperazine-2-one);

R_{200} is H, **R_{20}**, F, Cl, Br, I, OH, SH, alkoxy, methoxy, NH_2, $N(R)_2$, $NH(R_{10})$, $N(R_{10})(R_{11})$, CF_3, CN, NO_2, C_1-C_5 linear or branched, substituted or unsubstituted alkyl (e.g., methyl, ethyl, CH_2-CH_2-O-CH_2-CH_2-O-CH_3, CH_2-O-CH_2-CH_2-O-CH_3), C_1-C_5 linear or branched alkoxy (e.g., methoxy), C_1-C_5 linear or branched haloalkyl (e.g., CHF_2, CF_3, CF_2CH_3, CH_2CF_3, $CF_2CH_2CH_3$, $CH_2CH_2CF_3$,

$CF_2CH(CH_3)_2$,$CF(CH_3)$-$CH(CH_3)_2$), R_8-aryl (e.g., CH_2-Ph), -R_8-O-R_8-O-R_{10} (e.g. $(CH_2)_2$-O-$(CH_2)_2$-O-CH_3), -R_8-O-R_{10}, -R_8-R_{10} (e.g., $(CH_2)_2$-O-CH_3), substituted or unsubstituted aryl (e.g., phenyl), substituted or unsubstituted heteroaryl (e.g., pyridine (2, 3, and 4-pyridine);

or **R_{200}** and the carbon atom to which it is connected are C=O, C=N-O(R) (e.g, C=N-O-CH_3) or $C(R)_2$ (e.g., $C(CH_3)_2$, CF_2);

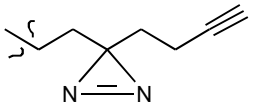
R_5 is H or C_1-C_5 linear or branched alkyl (e.g. methyl)**;**

R_6 is H, C_1-C_5 linear or branched alkyl (e.g., methyl, ethyl, iso-propyl), CD_3, or substituted or unsubstituted, saturated or unsaturated, single, fused, bridged or spiro 3-10 membered carbocyclic or heterocyclic ring (e.g., piperidine (2, 3, or 4-piperidine), 1-methylpiperidine (1-methyl-3-piperidine, 1-methyl-4-piperidine), 3-fluoro-1-methylpiperidine, 1-(2,2,2-trifluoroethyl)piperidine, azetidine, 1-methyl-azetidine (1-methyl-3-azetidine), morpholine, pyrrolidine, pyrrolidinone, quinuclidine, tetrahydropyran (4 or 3-tetrahydropyrane), tetrahydrofurane, azaspiro[3.3]heptane, 8-methyl-8-azabicyclo[3.2.1]octane, dioxane, 1,3-dioxane, imidazole, trifluoromethyl-oxetane, hydroxy-tetrahydrofurane, azepan-2-one, azabicyclohexane, 4,4-difluorocyclohexane, cyclopropyl);

R_7' and **R_7''** are each independently H, F, Cl, Br, I, OH, O-R_{20}, SH, R_8-OH, R_8-SH, -R_8-O-R_{10}, R_8-(C_3-C_8 cycloalkyl), R_8-(3-8 membered heterocyclic ring), CF_3, CD_3, OCD_3, CN, NO_2, -CH_2CN, -R_8CN, NH_2, NHR, $N(R)_2$, $NH(R_{10})$, $N(R_{10})(R_{11})$, R_8-$N(R_{10})(R_{11})$, R_9-R_8-$N(R_{10})(R_{11})$, $B(OH)_2$, -$OC(O)CF_3$, -OCH_2Ph, $NHC(O)$-R_{10}, $NHCO$-$N(R_{10})(R_{11})$, COOH, -C(O)Ph, C(O)O-R_{10}, R_8-C(O)-R_{10}, C(O)H, C(O)-R_{10}, C_1-C_5 linear or branched C(O)-haloalkyl, -$C(O)NH_2$, C(O)NHR, $C(O)N(R_{10})(R_{11})$, SO_2R, $SO_2N(R_{10})(R_{11})$, $CH(CF_3)(NH$-$R_{10})$, C_1-C_5 linear or branched, substituted or unsubstituted alkyl (e.g., isopropyl, methyl, ethyl), C_1-C_5 linear or branched, substituted or unsubstituted alkenyl, C_1-C_5 linear or branched, or C_3-C_8 cyclic haloalkyl (e.g., CHF_2), C_1-C_5 linear or branched, or C_3-C_8 cyclic alkoxy (e.g. methoxy), optionally wherein at least one methylene group (CH_2) in the alkoxy is replaced with an oxygen atom, C_1-C_5 linear or branched thioalkoxy, C_1-C_5 linear or branched haloalkoxy, C_1-C_5 linear or branched alkoxyalkyl, substituted or unsubstituted C_3-C_8 cycloalkyl (e.g., cyclopropyl, cyclohexyl), substituted or unsubstituted 3-8 membered heterocyclic ring (e.g., morpholine, pyran, oxetane, pyrrolidine, 3,3-difluoropyrrolidine, imidazole, pyrazole, triazole, piperazine, piperidine, piperidin-2-one, piperidin-4-ol, dioxazole, 2-oxopyrrolidine), substituted or unsubstituted aryl, substituted or unsubstituted benzyl;

or **R_7'** and **R_7''** are joined to form a 3-8 membered substituted or unsubstituted, saturated, unsaturated or aromatic, carbocyclic or heterocyclic ring (e.g., cyclopentyl, cyclohexyl, piperidine, tetrahydrofuran, tetrahydropyran, pyrrolidine);

R_{20} is represented by the following structure:



R is H, F, Cl, Br, I, OH, SH, alkoxy, $NH(R_{10})$, NH-CH_2-cyclopropyl, $N(R_{10})(R_{11})$, CF_3, CN, NO_2, COOH, C_1-C_5 linear or branched, substituted or unsubstituted alkyl (e.g., methyl, ethyl, CH_2-OH,

CH_2-CH_2-OH, CH_2-CH_2-O-CH_2-CH_2-O-CH_3, CH_2-O-CH_2-CH_2-O-CH_3), C_3-C_8 substituted or unsubstituted cycloalkyl, cyclopropyl, C_1-C_5 linear or branched alkoxy, isopropoxy, C_1-C_5 linear or branched haloalkyl (e.g., CHF_2, CF_3, CF_2CH_3, CH_2CF_3, $CF_2CH_2CH_3$, $CH_2CH_2CF_3$, $CF_2CH(CH_3)_2$,$CF(CH_3)$-$CH(CH_3)_2$), R_8-aryl (e.g., CH_2-Ph), -R_8-O-R_8-O-R_{10} (e.g. $(CH_2)_2$-O-$(CH_2)_2$-O-CH_3), -R_8-O-R_{10}, -R_8-R_{10} (e.g., $(CH_2)_2$-O-CH_3), substituted or unsubstituted aryl (e.g., phenyl), substituted or unsubstituted heteroaryl (e.g., pyridine (2, 3, and 4-pyridine);

R_{30} is H, **R_{20}**, F, Cl, Br, I, OH, SH, alkoxy, $N(R)_2$, $NH(R_{10})$, $N(R_{10})(R_{11})$, CF_3, CN, NO_2, C_1-C_5 linear or branched, substituted or unsubstituted alkyl (e.g., methyl, ethyl, CH_2-CH_2-O-CH_2-CH_2-O-CH_3, CH_2-O-CH_2-CH_2-O-CH_3), C_1-C_5 linear or branched alkoxy, C_1-C_5 linear or branched haloalkyl (e.g., CHF_2, CF_3, CF_2CH_3, CH_2CF_3, $CF_2CH_2CH_3$, $CH_2CH_2CF_3$, $CF_2CH(CH_3)_2$,$CF(CH_3)$-$CH(CH_3)_2$), R_8-aryl (e.g., CH_2-Ph), -R_8-O-R_8-O-R_{10} (e.g. $(CH_2)_2$-O-$(CH_2)_2$-O-CH_3), -R_8-O-R_{10}, -R_8-R_{10} (e.g., $(CH_2)_2$-O-CH_3), substituted or unsubstituted aryl (e.g., phenyl), substituted or unsubstituted heteroaryl (e.g., pyridine (2, 3, and 4-pyridine);

each **R_8** is independently $[\mathbf{CH_2}]_p$

wherein **p** is between 1 and 10;

R_9 is $[CH]_q$, $[C]_q$

wherein **q** is between 2 and 10;

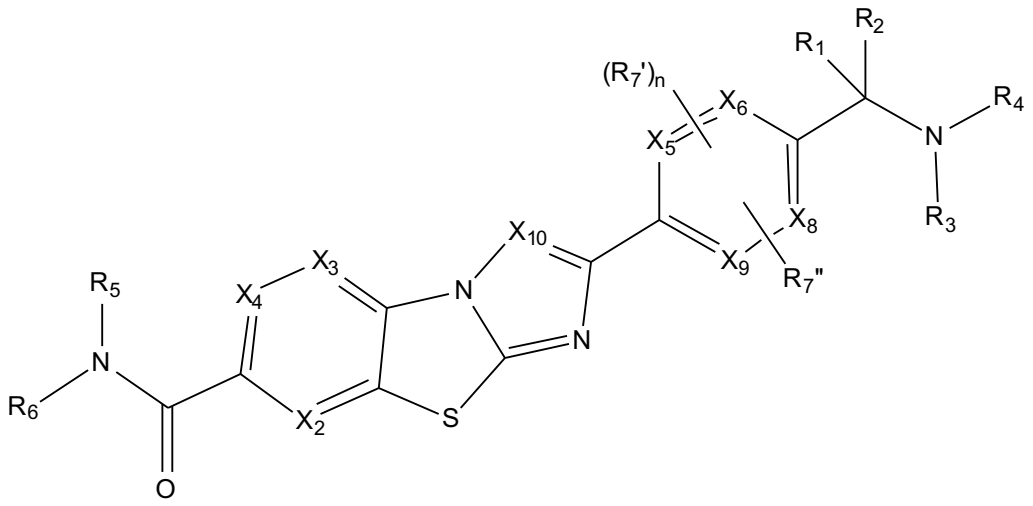
R_{10} and **R_{11}** are each independently H, C_1-C_5 substituted or unsubstituted linear or branched alkyl (e.g., methyl, ethyl, CH_2-cyclopropyl, CH_2-CH_2-O-CH_3), C_1-C_5 substituted or unsubstituted linear or branched haloalky (e.g., CH_2CF_3), C_1-C_5 linear or branched alkoxy (e.g., O-CH_3), **R_{20}**, C(O)R, or $S(O)_2R$;

or **R_{10}** and **R_{11}** are joined to form a substituted or unsubstituted 3-8 membered heterocyclic ring (e.g., piperazine, piperidine),

n is an integer between 0 and 4 (e.g., 1, 2);

or its pharmaceutically acceptable salt, stereoisomer, tautomer, hydrate, *N*-oxide, reverse amide analog, prodrug, isotopic variant (e.g., deuterated analog), PROTAC, pharmaceutical product or any combination thereof.

[007c] In another aspect, there is provided a compound represented by the structure of formula **I(o):**



I(o)

wherein

X_2, **X_3**, and **X_4** are each independently nitrogen or CH;

X_5 , **X_6** , **X_7**, **X_8** and **X_9** are each independently nitrogen or carbon atoms;

X_{10} is N, CH, or C(R) (e.g., $C(CH_2)OH$, $C(CH_2)_2OH$, $C(NH\text{-}CH_2\text{-cyclopropyl})$, $C(CH_3)$, C(cyclopropyl), C(isopropoxy), C(COOH));

R_1 is H, F, Cl, Br, I, OH, SH, or CF_3, substituted or unsubstituted C_1-C_5 alkyl (e.g., CH_2OH), C_1-C_5 linear or branched, or C_3-C_8 cyclic haloalkyl, substituted or unsubstituted C_1-C_5 linear or branched, or C_3-C_8 cyclic alkoxy;

R_2 is substituted or unsubstituted C_1-C_5 alkyl (e.g., CH_2OH, CH_2OCH_3), 3-8 membered carbocyclic or heterocyclic ring (e.g., oxetane);

or **R_1** and **R_2** are joined to form a 3-8 membered carbocyclic or heterocyclic ring (e.g., cyclopropyl, oxetane);

R_3 and **R_4** are each independently H, Me, substituted or unsubstituted C_1-C_5 alkyl (e.g., methoxyethylene, methylaminoethyl, aminoethyl), $\text{-}R_8\text{-O-}R_{10}$ (e.g., $(CH_2)_2\text{-O-}CH_3$), $R_8\text{-N}(R_{10})(R_{11})$ (e.g., $(CH_2)_2\text{-NH}(CH_3)$), substituted or unsubstituted C_3-C_8 cycloalkyl (e.g., cyclopropyl), substituted or unsubstituted 5-7 membered heterocyclic ring (e.g., pyrrolidine, methylpyrrolidine, piperidine), or $R_{20;}$ or

R_3 and **R_4** are joined to form a 3-8 membered heterocyclic ring (e.g., pyrrolidine, , pyrrolidone, 2-oxopyrrolidine, piperidine, morpholine, piperazine, imidazole);

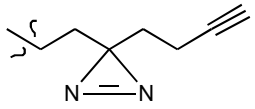
R_5 is H or C_1-C_5 linear or branched alkyl (e.g. methyl)**;**

R_6 is H, C_1-C_5 linear or branched alkyl (e.g., methyl, ethyl), substituted or unsubstituted, saturated or unsaturated, single fused, bridged or spiro 3-10 membered heterocyclic ring (e.g., piperidine, 1-methylpiperidine, 3-fluoro-1-methylpiperidine, azetidine, 1-methyl-azetidine, morpholine, pyrrolidine, pyrrolidinone, quinuclidine, tetrahydropyran, tetrahydrofurane, azaspiro[3.3]heptane, 8-methyl-8-azabicyclo[3.2.1]octane, dioxane, 1,3-dioxane, imidazole, trifluoromethyl-oxetane, hydroxy-tetrahydrofurane, azepan-2-one, azabicyclohexane) or $(CH_2)_3$-4-fluoro-piperidine;

R_7' and **R_7''** are each independently H, F, Cl, Br, I, OH, O-R_{20}, SH, R_8-OH, R_8-SH, -R_8-O-R_{10}, R_8-(C_3-C_8 cycloalkyl), R_8-(3-8 membered heterocyclic ring), CF_3, CD_3, OCD_3, CN, NO_2, -CH_2CN, -R_8CN, NH_2, NHR, $N(R)_2$, $NH(R_{10})$, $N(R_{10})(R_{11})$, R_8-$N(R_{10})(R_{11})$, R_9-R_8-$N(R_{10})(R_{11})$, $B(OH)_2$, -$OC(O)CF_3$, -OCH_2Ph, $NHC(O)$-R_{10}, $NHCO$-$N(R_{10})(R_{11})$, COOH, -C(O)Ph, $C(O)O$-R_{10}, R_8-$C(O)$-R_{10}, C(O)H, $C(O)$-R_{10}, C_1-C_5 linear or branched C(O)-haloalkyl, -$C(O)NH_2$, C(O)NHR, $C(O)N(R_{10})(R_{11})$, SO_2R, $SO_2N(R_{10})(R_{11})$, $CH(CF_3)(NH$-$R_{10})$, C_1-C_5 linear or branched, substituted or unsubstituted alkyl (e.g., isopropyl, methyl, ethyl), C_1-C_5 linear or branched, substituted or unsubstituted alkenyl, C_1-C_5 linear or branched, or C_3-C_8 cyclic haloalkyl (e.g., CHF_2), C_1-C_5 linear or branched, or C_3-C_8 cyclic alkoxy (e.g. methoxy), optionally wherein at least one methylene group (CH_2) in the alkoxy is replaced with an oxygen atom, C_1-C_5 linear or branched thioalkoxy, C_1-C_5 linear or branched haloalkoxy, C_1-C_5 linear or branched alkoxyalkyl, substituted or unsubstituted C_3-C_8 cycloalkyl (e.g., cyclopropyl, cyclohexyl), substituted or unsubstituted 3-8 membered heterocyclic ring (e.g., morpholine, pyran, oxetane, pyrrolidine, 3,3-difluoropyrrolidine, imidazole, pyrazole, triazole, piperazine, piperidine, piperidin-2-one, piperidin-4-ol, dioxazole, 2-oxopyrrolidine), substituted or unsubstituted aryl, substituted or unsubstituted benzyl;

or **R_7'** and **R_7''** are joined to form a 3-8 membered substituted or unsubstituted, saturated, unsaturated or aromatic, carbocyclic or heterocyclic ring (e.g., cyclopentyl, cyclohexyl, piperidine, tetrahydrofuran, tetrahydropyran, pyrrolidine);

R_{20} is represented by the following structure:



R is H, F, Cl, Br, I, OH, SH, alkoxy, $NH(R_{10})$, NH-CH_2-cyclopropyl, $N(R_{10})(R_{11})$, CF_3, CN, NO_2, COOH, C_1-C_5 linear or branched, substituted or unsubstituted alkyl (e.g., methyl, ethyl, CH_2-OH, CH_2-CH_2-OH, CH_2-CH_2-O-CH_2-CH_2-O-CH_3, CH_2-O-CH_2-CH_2-O-CH_3), C_3-C_8 substituted or unsubstituted cycloalkyl, cyclopropyl, C_1-C_5 linear or branched alkoxy, isopropoxy, C_1-C_5 linear or branched haloalkyl (e.g., CHF_2, CF_3, CF_2CH_3, CH_2CF_3, $CF_2CH_2CH_3$, $CH_2CH_2CF_3$, $CF_2CH(CH_3)_2$,$CF(CH_3)$-$CH(CH_3)_2$), R_8-aryl (e.g., CH_2-Ph), -R_8-O-R_8-O-R_{10} (e.g. $(CH_2)_2$-O-$(CH_2)_2$-O-CH_3), -R_8-O-R_{10}, -R_8-R_{10} (e.g., $(CH_2)_2$-O-CH_3), substituted or unsubstituted aryl (e.g., phenyl), substituted or unsubstituted heteroaryl (e.g., pyridine (2, 3, and 4-pyridine);

R_{30} is H, **R_{20}**, F, Cl, Br, I, OH, SH, alkoxy, $N(R)_2$, $NH(R_{10})$, $N(R_{10})(R_{11})$, CF_3, CN, NO_2, C_1-C_5 linear or branched, substituted or unsubstituted alkyl (e.g., methyl, ethyl, CH_2-CH_2-O-CH_2-CH_2-O-CH_3, CH_2-O-CH_2-CH_2-O-CH_3), C_1-C_5 linear or branched alkoxy, C_1-C_5 linear or branched haloalkyl (e.g., CHF_2, CF_3, CF_2CH_3, CH_2CF_3, $CF_2CH_2CH_3$, $CH_2CH_2CF_3$, $CF_2CH(CH_3)_2$,$CF(CH_3)$-$CH(CH_3)_2$), R_8-aryl (e.g., CH_2-Ph), -R_8-O-R_8-O-R_{10} (e.g. $(CH_2)_2$-O-$(CH_2)_2$-O-CH_3), -R_8-O-R_{10}, -R_8-R_{10} (e.g., $(CH_2)_2$-O-CH_3), substituted or unsubstituted aryl (e.g., phenyl), substituted or unsubstituted heteroaryl (e.g., pyridine (2, 3, and 4-pyridine);

each **R_8** is independently $[\mathbf{CH_2}]_p$

wherein **p** is between 1 and 10;

R_9 is $[CH]_q$, $[C]_q$

wherein **q** is between 2 and 10;

R_{10} and **R_{11}** are each independently H, C_1-C_5 substituted or unsubstituted linear or branched alkyl (e.g., methyl, ethyl, CH_2-cyclopropyl, CH_2-CH_2-O-CH_3), C_1-C_5 substituted or unsubstituted linear or branched haloalky (e.g., CH_2CF_3), C_1-C_5 linear or branched alkoxy (e.g., O-CH_3), **R_{20}**, C(O)R, or $S(O)_2R$;

or **R_{10}** and **R_{11}** are joined to form a substituted or unsubstituted 3-8 membered heterocyclic ring (e.g., piperazine, piperidine),

n is an integer between 0 and 4 (e.g., 1, 2);

or its pharmaceutically acceptable salt, stereoisomer, tautomer, hydrate, *N*-oxide, reverse amide analog, prodrug, isotopic variant (e.g., deuterated analog), PROTAC, pharmaceutical product or any combination thereof.

[007d] In another aspect, there is provided a compound represented by the structure of any one of the following compounds:

Compound No.	Compound Name
423S	*(S)-2-(2-fluoro-4-(pyrrolidin-2-yl)phenyl)-N-(3-(2-oxopiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
423R	*(R)-2-(2-fluoro-4-(pyrrolidin-2-yl)phenyl)-N-(3-(2-oxopiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
424	*N-(3-(4-cyanopiperidin-1-yl)propyl)-2-(2-fluoro-4-(pyrrolidin-2-yl)phenyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
426	*2-(2-fluoro-4-(pyrrolidin-2-yl)phenyl)-N-(3-(4-(trifluoromethyl)piperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
431S	*N-(3-(6-fluoro-3-azabicyclo[3.1.1]heptan-3-yl)propyl)-2-(2-fluoro-4-((S)-pyrrolidin-2-yl)phenyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
431R	*N-(3-(6-fluoro-3-azabicyclo[3.1.1]heptan-3-yl)propyl)-2-(2-fluoro-4-((R)-pyrrolidin-2-yl)phenyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
437S	*(S)-2-(2-fluoro-5-(pyrrolidin-2-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
437R	*(R)-2-(2-fluoro-5-(pyrrolidin-2-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
438S	*(S)-2-(2-fluoro-6-(pyrrolidin-2-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
438R	*(R)-2-(2-fluoro-6-(pyrrolidin-2-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
439S	*(S)-2-(2-fluoro-3-(pyrrolidin-2-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
439R	*(R)-2-(2-fluoro-3-(pyrrolidin-2-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
454	*2-(6-fluoroisoindolin-5-yl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
455	*2-(7-fluoro-1,2,3,4-tetrahydroisoquinolin-6-yl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*

456	*2-(6-fluoro-1,3-dihydroisobenzofuran-5-yl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
457	*2-(7-fluoroisochroman-6-yl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
458	*2-(7-fluoroindolin-6-yl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
459	*2-(4-fluoroindolin-5-yl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
460S	*(S)-2-(2-fluoro-4-(pyrrolidin-2-yl)-5,6,7,8-tetrahydronaphthalen-1-yl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
460R	*(R)-2-(2-fluoro-4-(pyrrolidin-2-yl)-5,6,7,8-tetrahydronaphthalen-1-yl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
461S	*(S)-2-(5-fluoro-7-(pyrrolidin-2-yl)-2,3-dihydro-1H-inden-4-yl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
461R	*(R)-2-(5-fluoro-7-(pyrrolidin-2-yl)-2,3-dihydro-1H-inden-4-yl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
478	*methyl 3-fluoro-4-(7-((3-(4-fluoropiperidin-1-yl)propyl)carbamoyl)benzo[d]imidazo[2,1-b]thiazol-2-yl)benzoate*
494	*2-(2-fluoro-4-propionylphenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
495	*N-(3-(4-fluoropiperidin-1-yl)propyl)-2-(2-methylpyridin-4-yl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
496	*2-(2-methylpyridin-4-yl)-N-(piperidin-4-yl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
497	*N-(piperidin-4-yl)-2-(m-tolyl)benzo[4,5]thiazolo[3,2-b][1,2,4]triazole-6-carboxamide*
502	*N-(piperidin-4-yl)-2-(m-tolyl)imidazo[2',1':2,3]thiazolo[4,5-c]pyridine-7-carboxamide*
580	*N-(3-(4-fluoropiperidin-1-yl)propyl)-2-(pyrrolidin-2-yl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
600	*2-(6-fluoro-1,2,3,4-tetrahydroisoquinolin-7-yl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
601	*2-(5-fluoroindolin-6-yl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
602	*2-(6-fluoroindolin-5-yl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*

or its pharmaceutically acceptable salt, stereoisomer, tautomer, hydrate, *N*-oxide, reverse amide analog, prodrug, isotopic variant (e.g., deuterated analog), PROTAC, pharmaceutical product or any combination thereof.

[007e] In another aspect, there is provided a pharmaceutical composition comprising the compound as defined above and a pharmaceutically acceptable carrier.

[007f] In another aspect, there is provided the use of a compound as defined above or the pharmaceutical composition as defined above, in the preparation of a medicament for treating, suppressing, reducing the severity, reducing the risk of developing or inhibiting cancer in a subject.

[007g] In another aspect, there is provided the use of the compound as defined above or the pharmaceutical composition as defined above, in the preparation of a medicament for suppressing, reducing or inhibiting tumor growth in a subject.

[007h] In another aspect, there is provided a method of modulating c-MYC mRNA translation, or regulating c-MYC mRNA transcription in a cell, comprising contacting a compound as defined above with a cell, thereby modulating c-MYC mRNA translation, or regulating c-MYC mRNA transcription in said cell.

[008] This disclosure provides a compound or its pharmaceutically acceptable salt, stereoisomer, tautomer, hydrate, *N*-oxide, reverse amide analog, prodrug, isotopic variants (e.g., deuterated analog), PROTAC, pharmaceutical product or any combination thereof, represented by the structure of formula **I(j), I(n)** and/or **I(o)**, and by the structures listed in Table 1, as defined herein below. In various examples, the compound is a c-MYC mRNA translation modulator. In various examples, the compound is a c-MYC mRNA transcription regulator. In various examples, the compound is a c-

MYC inhibitor. In various examples, the compound is any combination of a c-MYC mRNA translation modulator, c-MYC mRNA transcription regulator and c-MYC inhibitor.

[009] This disclosure further provides a pharmaceutical composition comprising a compound or its pharmaceutically acceptable salt, stereoisomer, tautomer, hydrate, *N*-oxide, prodrug, isotopic variants (e.g., deuterated analog), PROTAC, pharmaceutical product or any combination thereof, represented by the structure of formula **I(j), I(n)** and/or **I(o)**, and by the structures listed in Table 1, as defined herein below, and a pharmaceutically acceptable carrier.

[0010] This disclosure further provides a method of treating, suppressing, reducing the severity, reducing the risk of developing or inhibiting cancer in a subject, comprising administering a compound represented by the structure of formula **I(j), I(n)** and/or **I(o)**, and by the structures listed in Table 1, as defined herein below, to a subject suffering from cancer under conditions effective to treat, suppress, reduce the severity, reduce the risk of developing, or inhibit cancer in said subject.

[0011] This disclosure further provides a method for suppressing, reducing or inhibiting tumor growth in a subject, comprising administering a compound represented by the structure of formula **I(j), I(n)** and/or **I(o)**, and by the structures listed in Table 1, as defined herein below, to a subject, under conditions effective to suppress, reduce or inhibit tumor growth in said subject. In some examples, the tumor is cancerous. In some examples, the subject suffers from cancer.

[0012] This disclosure further provides a method of modulating c-MYC mRNA translation in a cell, comprising contacting a compound represented by the structure of formula **I(j), I(n)** and/or **I(o)**and by the structures listed in Table 1, as defined herein below, with a cell, thereby modulating c-MYC mRNA translation in said cell.

[0013] This disclosure further provides a method of regulating c-MYC mRNA transcription in a cell, comprising contacting a compound represented by the structure of formula **I(j), I(n)** and/or **I(o)** and by the structures listed in Table 1, as defined herein below, with a cell, thereby regulating c-MYC mRNA transcription in said cell.

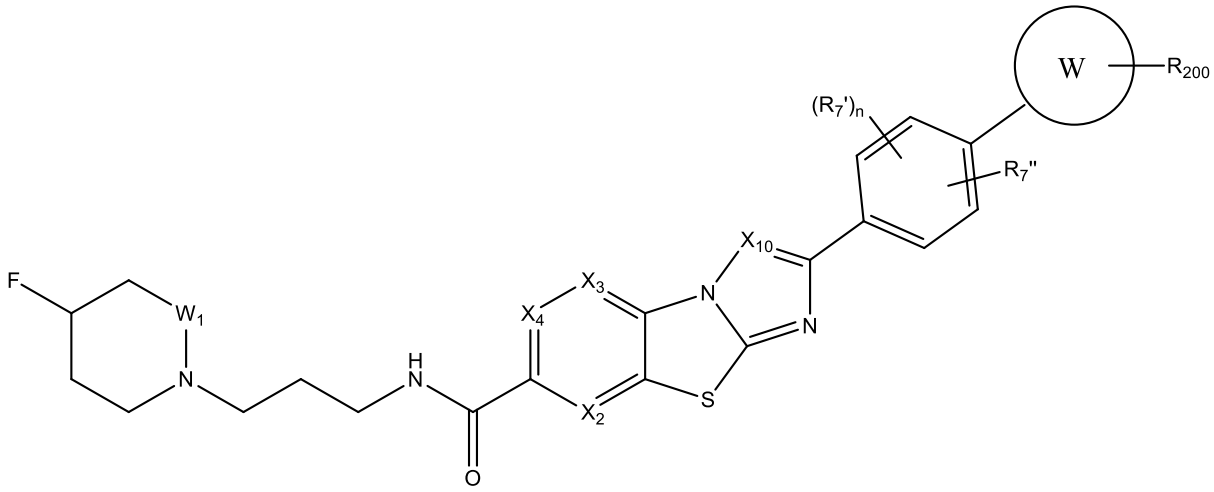
BRIEF DESCRIPTION OF THE DRAWINGS

[0014] The patent or application file contains at least one drawing executed in color. Copies of this patent or patent application publication with color drawing(s) will be provided by the office upon request and payment of the necessary fee.

[0015] **Figure 1** demonstrates how Protein Synthesis Monitoring (PSM) specifically monitors c-Myc synthesis. The assay system comprises human non-small cell lung carcinoma cell line A549, which is expressing high level of c-Myc. Two tRNAs (di-tRNA) which decode one specific glutamine codon and one specific serine codon were transfected with control RNAi or an RNAi directed to c-Myc. The FRET signal specifically monitors c-Myc translation, as the FRET signal in c-Myc siRNA treated cells was inhibited. In blue, cell nuclei stained with DAPI; in yellow, FRET signals from tRNA pair which decodes glutamine-serine di-codons.

WHAT IS CLAIMED:

1. A compound represented by the structure of formula **I(j):**



I(j)

wherein

X_2, **X_3**, and **X_4**, are each independently nitrogen or CH;

X_{10} is N, CH, or C(R) (e.g., $C(CH_2)OH$, $C(CH_2)_2OH$, C(NH-CH_2-cyclopropyl), $C(CH_3)$, C(cyclopropyl), C(isopropoxy), C(COOH));

Ring W is a 3-10 membered single, fused, bridged or spiro, saturated, unsaturated or aromatic, carbocyclic or heterocyclic ring (e.g., morpholine (2 or 3-morpholine), tetrahydrofuran, tetrahydropyran, oxetane, pyrrolidine, pyrrolidin-2-one, pyrrolidin-3-one, imidazole, pyrazole, isoxazolidine, piperazine, piperidine, piperidine-2-one, oxadiazole, triazole, 2-oxopyrrolidine, cyclopropyl, 2,2-dimethylpyrrolidine, 4-azaspiro[2.4]heptane, pyrrolidin-3-one-O-methyloxime, 2-oxa-5-azaspiro[3.4]octane, 1,4-dioxa-6-azaspiro[4.4]nonane, 3,3-dimethylmorpholine, 1-methylpiperazine, 4,7-diazaspiro[2.5]octane, bicyclo[1.1.1]pentane, 2,5-diazabicyclo[2.2.1]heptane, piperazine, piperazine-2-one);

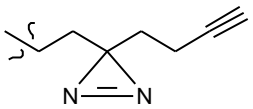
W_1 is CH_2, C=O or CH(**R_{10}**) (e.g., $CHCH_3$);

R_7' and **R_7''** are each independently H, F, Cl, Br, I, OH, O-R_{20}, SH, R_8-OH, R_8-SH, -R_8-O-R_{10}, R_8-(C_3-C_8 cycloalkyl), R_8-(3-8 membered heterocyclic ring), CF_3, CD_3, OCD_3, CN, NO_2, -CH_2CN, -R_8CN, NH_2, NHR, $N(R)_2$, $NH(R_{10})$, $N(R_{10})(R_{11})$, R_8-$N(R_{10})(R_{11})$, R_9-R_8-$N(R_{10})(R_{11})$, $B(OH)_2$, -OC(O)CF_3, -OCH_2Ph, NHC(O)-R_{10}, NHCO-$N(R_{10})(R_{11})$, COOH, -C(O)Ph, C(O)O-R_{10}, R_8-C(O)-R_{10}, C(O)H, C(O)-R_{10}, C_1-C_5 linear or branched C(O)-haloalkyl, -$C(O)NH_2$, C(O)NHR, $C(O)N(R_{10})(R_{11})$, SO_2R, $SO_2N(R_{10})(R_{11})$, $CH(CF_3)(NH\text{-}R_{10})$, C_1-C_5 linear or branched, substituted or unsubstituted alkyl (e.g., isopropyl, methyl, ethyl), C_1-C_5 linear or branched, substituted or unsubstituted alkenyl, C_1-C_5 linear or branched, or C_3-C_8 cyclic haloalkyl (e.g., CHF_2), C_1-C_5 linear or branched, or C_3-C_8 cyclic alkoxy (e.g. methoxy), optionally wherein at least one methylene group (CH_2) in the alkoxy is replaced with an oxygen atom, C_1-C_5 linear or branched thioalkoxy, C_1-C_5 linear or branched haloalkoxy, C_1-C_5 linear or branched alkoxyalkyl, substituted or unsubstituted C_3-C_8 cycloalkyl (e.g., cyclopropyl,

cyclohexyl), substituted or unsubstituted 3-8 membered heterocyclic ring (e.g., morpholine, pyran, oxetane, pyrrolidine, 3,3-difluoropyrrolidine, imidazole, pyrazole, triazole, piperazine, piperidine, piperidin-2-one, piperidin-4-ol, dioxazole, 2-oxopyrrolidine), substituted or unsubstituted aryl, substituted or unsubstituted benzyl;

or **R_7'** and **R_7''** are joined to form a 3-8 membered substituted or unsubstituted, saturated, unsaturated or aromatic, carbocyclic or heterocyclic ring (e.g., cyclopentyl, cyclohexyl, piperidine, tetrahydrofuran, tetrahydropyran, pyrrolidine);

R_{20} is represented by the following structure:



R is H, F, Cl, Br, I, OH, SH, alkoxy, NH(R_{10}), NH-CH_2-cyclopropyl, N(R_{10})(R_{11}), CF_3, CN, NO_2, COOH, C_1-C_5 linear or branched, substituted or unsubstituted alkyl (e.g., methyl, ethyl, CH_2-OH, CH_2-CH_2-OH, CH_2-CH_2-O-CH_2-CH_2-O-CH_3, CH_2-O-CH_2-CH_2-O-CH_3), C_3-C_8 substituted or unsubstituted cycloalkyl, cyclopropyl, C_1-C_5 linear or branched alkoxy, isopropoxy, C_1-C_5 linear or branched haloalkyl (e.g., CHF_2, CF_3, CF_2CH_3, CH_2CF_3, $CF_2CH_2CH_3$, $CH_2CH_2CF_3$, $CF_2CH(CH_3)_2$,$CF(CH_3)$-$CH(CH_3)_2$), R_8-aryl (e.g., CH_2-Ph), -R_8-O-R_8-O-R_{10} (e.g. $(CH_2)_2$-O-$(CH_2)_2$-O-CH_3), -R_8-O-R_{10} (CH_2-OH, CH_2-CH_2-OH), -R_8-R_{10} (e.g., $(CH_2)_2$-O-CH_3), substituted or unsubstituted aryl (e.g., phenyl), substituted or unsubstituted heteroaryl (e.g., pyridine (2, 3, and 4-pyridine);

R_{30} is H, **R_{20}**, F, Cl, Br, I, OH, SH, alkoxy, N(R)$_2$, NH(R_{10}), N(R_{10})(R_{11}), CF_3, CN, NO_2, C_1-C_5 linear or branched, substituted or unsubstituted alkyl (e.g., methyl, ethyl, CH_2-CH_2-O-CH_2-CH_2-O-CH_3, CH_2-O-CH_2-CH_2-O-CH_3), C_1-C_5 linear or branched alkoxy, C_1-C_5 linear or branched haloalkyl (e.g., CHF_2, CF_3, CF_2CH_3, CH_2CF_3, $CF_2CH_2CH_3$, $CH_2CH_2CF_3$, $CF_2CH(CH_3)_2$,$CF(CH_3)$-$CH(CH_3)_2$), R_8-aryl (e.g., CH_2-Ph), -R_8-O-R_8-O-R_{10} (e.g. $(CH_2)_2$-O-$(CH_2)_2$-O-CH_3), -R_8-O-R_{10}, -R_8-R_{10} (e.g., $(CH_2)_2$-O-CH_3), substituted or unsubstituted aryl (e.g., phenyl), substituted or unsubstituted heteroaryl (e.g., pyridine (2, 3, and 4-pyridine);

R_{200} is H, **R_{20}**, F, Cl, Br, I, OH, SH, alkoxy, NH_2, N(R)$_2$, NH(R_{10}), N(R_{10})(R_{11}), CF_3, CN, NO_2, C_1-C_5 linear or branched, substituted or unsubstituted alkyl (e.g., methyl, ethyl, CH_2-CH_2-O-CH_2-CH_2-O-CH_3, CH_2-O-CH_2-CH_2-O-CH_3), C_1-C_5 linear or branched alkoxy (e.g., methoxy), C_1-C_5 linear or branched haloalkyl (e.g., CHF_2, CF_3, CF_2CH_3, CH_2CF_3, $CF_2CH_2CH_3$, $CH_2CH_2CF_3$, $CF_2CH(CH_3)_2$,$CF(CH_3)$-$CH(CH_3)_2$), R_8-aryl (e.g., CH_2-Ph), -R_8-O-R_8-O-R_{10} (e.g. $(CH_2)_2$-O-$(CH_2)_2$-O-CH_3), -R_8-O-R_{10}, -R_8-R_{10} (e.g., $(CH_2)_2$-O-CH_3), substituted or unsubstituted aryl (e.g., phenyl), substituted or unsubstituted heteroaryl (e.g., pyridine (2, 3, and 4-pyridine);

or **R_{200}** and the carbon atom to which it is connected are C=O, C=N-O(R) (e.g, C=N-O-CH_3) or C(R)$_2$ (e.g., $C(CH_3)_2$, CF_2);

each **R_8** is independently $[\mathbf{CH_2}]_p$

wherein **p** is between 1 and 10;

R_9 is $[CH]_q$, $[C]_q$

wherein **q** is between 2 and 10;

$\mathbf{R_{10}}$ and $\mathbf{R_{11}}$ are each independently H, C_1-C_5 substituted or unsubstituted linear or branched alkyl (e.g., methyl, ethyl, CH_2-cyclopropyl, CH_2-CH_2-O-CH_3), C_1-C_5 substituted or unsubstituted linear or branched haloalky (e.g., CH_2CF_3), C_1-C_5 linear or branched alkoxy (e.g., O-CH_3), $\mathbf{R_{20}}$, C(O)R, or $S(O)_2R$;

or $\mathbf{R_{10}}$ and $\mathbf{R_{11}}$ are joined to form a substituted or unsubstituted 3-8 membered heterocyclic ring (e.g., piperazine, piperidine),

n is an integer between 0 and 4 (e.g., 1, 2);

or its pharmaceutically acceptable salt, stereoisomer, tautomer, hydrate, *N*-oxide, reverse amide analog, prodrug, isotopic variant (e.g., deuterated analog), PROTAC, pharmaceutical product or any combination thereof.

2. The compound of claim 1, wherein

Ring W is a 3-8 membered single saturated heterocyclic ring, preferably morpholine (2 or 3-morpholine), tetrahydrofuran, tetrahydropyran, oxetane, pyrrolidine, isoxazolidine, piperazine, piperidine;

a 3-8 membered single unsaturated heterocyclic ring, preferably pyrrolidin-2-one, pyrrolidin-3-one, imidazole, pyrazole, piperidine-2-one, piperazine-2-one, oxadiazole, triazole, 2-oxopyrrolidine;

a 3-10 membered spiro saturated heterocyclic ring, preferably 4-azaspiro[2.4]heptane, 2-oxa-5-azaspiro[3.4]octane, 1,4-dioxa-6-azaspiro[4.4]nonane, 4,7-diazaspiro[2.5]octane;

a 3-10 membered bridged saturated heterocyclic ring, preferably bicyclo[1.1.1]pentane, 2,5-diazabicyclo[2.2.1]heptane;

or a 3-8 membered single saturated carbocyclic ring (i.e., cycloalkyl), preferably cyclopropyl;

$\mathbf{R_{200}}$ is H, OH, F, NH_2, C_1-C_5 linear or branched alkoxy, methoxy, CN, C_1-C_5 linear or branched, substituted or unsubstituted alkyl (e.g., methyl), C_1-C_5 linear or branched haloalkyl, CHF_2, or $\mathbf{R_{200}}$ and the carbon atom to which it is connected are C=O, C=N-O(R) (e.g, C=N-O-CH_3) or $C(R)_2$ (e.g., $C(CH_3)_2$, CF_2)

$\mathbf{X_2}$, and $\mathbf{X_3}$ are CH;

$\mathbf{X_4}$, **is N** or **CH;**

$\mathbf{X_{10}}$ is N, CH, $C(CH_2)OH$, $C(CH_2)_2OH$, C(NH-CH_2-cyclopropyl), $C(CH_3)$, C(cyclopropyl), C(isopropoxy) or C(COOH);

$\mathbf{R_7}$ **'** is H, F, Cl, CF_3, C_1-C_5 linear or branched, substituted or unsubstituted alkyl, preferably methyl, C_1-C_5 linear or branched, or C_3-C_8 cyclic alkoxy, preferably methoxy, substituted or

unsubstituted C_3-C_8 cycloalkyl, preferably cyclopropyl or cyclohexyl, or substituted or unsubstituted aryl;

R_7'' is H or F;

n is 1 or 2;

or any combination thereof.

3. The compound of claim 1 or 2, selected from the following:

Compound No.	Compound Name
425	*2-(2-fluoro-4-(3-hydroxyoxetan-3-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
427S	*(S)-N-(3-(4-fluoropiperidin-1-yl)propyl)-2-(4-(pyrrolidin-2-yl)-3-(trifluoromethyl)phenyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
427R	*(R)-N-(3-(4-fluoropiperidin-1-yl)propyl)-2-(4-(pyrrolidin-2-yl)-3-(trifluoromethyl)phenyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
428S	*(S)-2-(2-fluoro-4-(tetrahydrofuran-2-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
428R	*(R)-2-(2-fluoro-4-(tetrahydrofuran-2-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
429S	*N-(3-(4-fluoro-2-methylpiperidin-1-yl)propyl)-2-(2-fluoro-4-((S)-pyrrolidin-2-yl)phenyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
429R	*N-(3-(4-fluoro-2-methylpiperidin-1-yl)propyl)-2-(2-fluoro-4-((R)-pyrrolidin-2-yl)phenyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
430S	*N-(3-(4-fluoro-2-oxopiperidin-1-yl)propyl)-2-(2-fluoro-4-((S)-pyrrolidin-2-yl)phenyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
430R	*N-(3-(4-fluoro-2-oxopiperidin-1-yl)propyl)-2-(2-fluoro-4-((R)-pyrrolidin-2-yl)phenyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
432S	*(S)-2-(2-fluoro-4-(5-oxopyrrolidin-2-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
432R	*(R)-2-(2-fluoro-4-(5-oxopyrrolidin-2-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
433S	*(S)-2-(2-fluoro-4-(1-methylpyrrolidin-2-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
433R	*(R)-2-(2-fluoro-4-(1-methylpyrrolidin-2-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
434S	*(S)-2-(2-fluoro-4-(pyrrolidin-3-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
434R	*(R)-2-(2-fluoro-4-(pyrrolidin-3-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
435S	*(S)-2-(2-fluoro-4-(tetrahydrofuran-3-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
435R	*(R)-2-(2-fluoro-4-(tetrahydrofuran-3-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
436S	*(S)-2-(2-fluoro-4-(piperidin-2-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
436R	*(R)-2-(2-fluoro-4-(piperidin-2-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
440	*2-(2-fluoro-4-(1-hydroxycyclopropyl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
442	*(S)-3-((cyclopropylmethyl)amino)-N-(3-(4-fluoropiperidin-1-yl)propyl)-2-(4-(pyrrolidin-2-yl)phenyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
443	*(R)-3-((cyclopropylmethyl)amino)-N-(3-(4-fluoropiperidin-1-yl)propyl)-2-(4-(pyrrolidin-2-yl)phenyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
444	*(S)-3-((cyclopropylmethyl)amino)-2-(2-fluoro-4-(pyrrolidin-2-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*

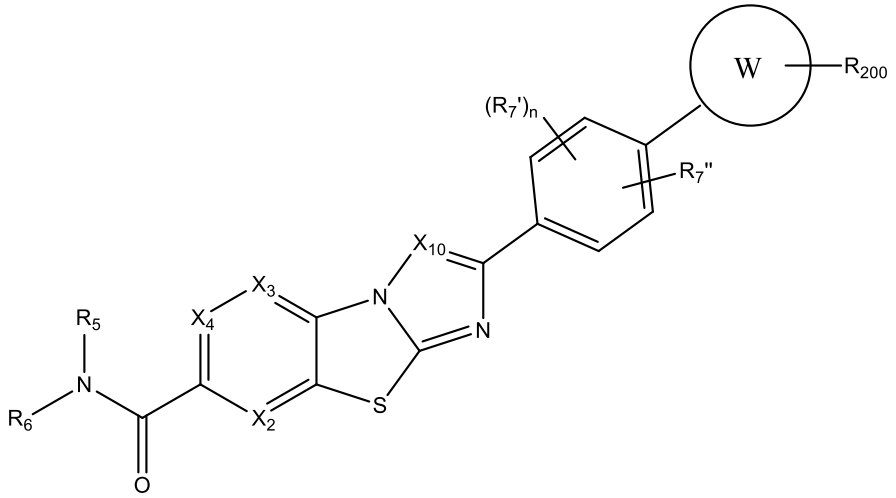
445	*(R)-3-((cyclopropylmethyl)amino)-2-(2-fluoro-4-(pyrrolidin-2-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
446	*N-(3-(4-fluoro-2-oxopiperidin-1-yl)propyl)-2-(2-fluoro-4-((S)-tetrahydrofuran-2-yl)phenyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
447	*N-(3-(4-fluoro-2-oxopiperidin-1-yl)propyl)-2-(2-fluoro-4-((S)-tetrahydrofuran-2-yl)phenyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
448	*N-(3-(4-fluoro-2-oxopiperidin-1-yl)propyl)-2-(2-fluoro-4-((S)-5-oxopyrrolidin-2-yl)phenyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
449	*N-(3-(4-fluoro-2-oxopiperidin-1-yl)propyl)-2-(2-fluoro-4-((R)-5-oxopyrrolidin-2-yl)phenyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
450S	*(S)-2-(2,6-difluoro-4-(pyrrolidin-2-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
450R	*(R)-2-(2,6-difluoro-4-(pyrrolidin-2-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
451S	*(S)-2-(2,6-dimethyl-4-(pyrrolidin-2-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
451R	*(R)-2-(2,6-dimethyl-4-(pyrrolidin-2-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
452S	*(S)-2-(2-cyclopropyl-4-(pyrrolidin-2-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
452R	*(R)-2-(2-cyclopropyl-4-(pyrrolidin-2-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
453S	*(S)-2-(2,3-dimethyl-4-(pyrrolidin-2-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
453R	*(R)-2-(2,3-dimethyl-4-(pyrrolidin-2-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
462S	*(S)-2-(2-fluoro-4-(pyrrolidin-2-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)-3-(hydroxymethyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
462R	*(R)-2-(2-fluoro-4-(pyrrolidin-2-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)-3-(hydroxymethyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
463S	*(S)-2-(2-fluoro-4-(pyrrolidin-2-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)-3-(2-hydroxyethyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
463R	*(R)-2-(2-fluoro-4-(pyrrolidin-2-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)-3-(2-hydroxyethyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
464S	*(S)-2-(2-fluoro-4-(pyrrolidin-2-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)-3-methylbenzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
464R	*(R)-2-(2-fluoro-4-(pyrrolidin-2-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)-3-methylbenzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
465	*(S)-3-cyclopropyl-N-(3-(4-fluoropiperidin-1-yl)propyl)-2-(4-(tetrahydrofuran-2-yl)phenyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
466	*(R)-3-cyclopropyl-N-(3-(4-fluoropiperidin-1-yl)propyl)-2-(4-(tetrahydrofuran-2-yl)phenyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
467	*(S)-3-cyclopropyl-N-(3-(4-fluoropiperidin-1-yl)propyl)-2-(4-(pyrrolidin-2-yl)phenyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
468	*(R)-3-cyclopropyl-N-(3-(4-fluoropiperidin-1-yl)propyl)-2-(4-(pyrrolidin-2-yl)phenyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
469S	*(S)-2-(2-fluoro-4-(pyrrolidin-2-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)-3-isopropoxybenzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
469R	*(R)-2-(2-fluoro-4-(pyrrolidin-2-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)-3-isopropoxybenzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
470S	*(S)-2-(3-fluoro-5-(pyrrolidin-2-yl)-[1,1'-biphenyl]-2-yl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
470R	*(R)-2-(3-fluoro-5-(pyrrolidin-2-yl)-[1,1'-biphenyl]-2-yl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*

471S	*(S)-2-(2-cyclohexyl-6-fluoro-4-(pyrrolidin-2-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
471R	*(R)-2-(2-cyclohexyl-6-fluoro-4-(pyrrolidin-2-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
472S	*(S)-2-(5-cyclopropyl-2-fluoro-4-(pyrrolidin-2-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
472R	*(R)-2-(5-cyclopropyl-2-fluoro-4-(pyrrolidin-2-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
473S	*(S)-2-(2-fluoro-4-(pyrrolidin-2-yl)phenyl)-7-((3-(4-fluoropiperidin-1-yl)propyl)carbamoyl)benzo[d]imidazo[2,1-b]thiazole-3-carboxylic acid*
473R	*(R)-2-(2-fluoro-4-(pyrrolidin-2-yl)phenyl)-7-((3-(4-fluoropiperidin-1-yl)propyl)carbamoyl)benzo[d]imidazo[2,1-b]thiazole-3-carboxylic acid*
474	*2-(4-(1-aminocyclopropyl)-2-fluorophenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
475	*2-(2-cyclopropyl-6-fluoro-4-(pyrrolidin-2-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
476	*2-(2,3-difluoro-4-(pyrrolidin-2-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
477	*2-(2,5-difluoro-4-(pyrrolidin-2-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
479	*2-(2-fluoro-4-(pyrrolidin-3-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
480	*2-(2-fluoro-4-(piperidin-2-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
481	*2-(2-fluoro-4-(morpholin-3-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
482	*2-(2-fluoro-4-(1H-imidazol-2-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
483	*2-(2-fluoro-4-(4H-1,2,4-triazol-3-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
484	*2-(3-fluoro-4-(pyrrolidin-2-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
485	*2-(3-chloro-5-fluoro-4-(pyrrolidin-2-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
486	*2-(2-fluoro-4-(6-oxopiperidin-2-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
487	*2-(2-fluoro-4-(1H-pyrazol-5-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
488	*2-(2-fluoro-4-(2H-1,2,3-triazol-4-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
489	*2-(2-fluoro-5-methoxy-4-(pyrrolidin-2-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
490	*2-(4-(4,4-difluoropyrrolidin-2-yl)-2-fluorophenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
493	*2-(2-fluoro-4-(4-hydroxypyrrolidin-2-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
501	*2-(2-fluoro-4-(pyrrolidin-2-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)imidazo[2',1':2,3]thiazolo[4,5-c]pyridine-7-carboxamide*
507	*2-(2-fluoro-4-(4-oxopyrrolidin-2-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
508	*2-(2-fluoro-4-(piperidin-4-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
509R	*(R)-2-(2-fluoro-4-(pyrrolidin-2-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)imidazo[2',1':2,3]thiazolo[4,5-c]pyridine-7-carboxamide*

509S	*(S)-2-(2-fluoro-4-(pyrrolidin-2-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)imidazo[2',1':2,3]thiazolo[4,5-c]pyridine-7-carboxamide*
512	*2-(2-fluoro-4-(4-hydroxypiperidin-4-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
513	*2-(2-fluoro-4-(piperidin-3-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
516	*2-(2-fluoro-4-(3-hydroxypyrrolidin-3-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
523	*2-(2-fluoro-4-((2S,4S)-4-methoxypyrrolidin-2-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
542	*2-(4-(4-(difluoromethyl)pyrrolidin-2-yl)-2-fluorophenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
543	*2-(2-fluoro-4-(isoxazolidin-5-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*

4. The compound of any one of claims 1-3, wherein the compounds is not *(R)-2-(2-fluoro-4-(pyrrolidin-2-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl) benzo[d]imidazo [2,1-b] thiazole-7-carboxamide, (S)-2-(2-fluoro-4-(pyrrolidin-2-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide* or *2-(2-fluoro-4-(pyrrolidin-2-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl) benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*.

5. A compound represented by the structure of formula **I(n):**



I(n)

wherein

X_2, **X_3**, and **X_4**, are each independently nitrogen or CH;

X_{10} is N, CH, or C(R) (e.g., $C(CH_2)OH$, $C(CH_2)_2OH$, C(NH-CH_2-cyclopropyl), $C(CH_3)$, C(cyclopropyl), C(isopropoxy), C(COOH));

Ring W is a 3-10 membered single, fused, bridged or spiro, saturated, unsaturated or aromatic, carbocyclic or heterocyclic ring (e.g., morpholine (2 or 3-morpholine), tetrahydrofuran, tetrahydropyran, oxetane, pyrrolidine, pyrrolidin-2-one, pyrrolidin-3-one, pyrrolidinone, imidazole, pyrazole, isoxazolidine, piperazine, piperidine, piperidine-2-one, oxadiazole, triazole, 2-oxopyrrolidine, cyclopropyl, 4-azaspiro[2.4]heptane, pyrrolidin-3-one-O-methyloxime, 2-oxa-5-azaspiro[3.4]octane,

1,4-dioxa-6-azaspiro[4.4]nonane, 4,7-diazaspiro[2.5]octane, bicyclo[1.1.1]pentane, 2,5-diazabicyclo[2.2.1]heptane, piperazine, piperazine-2-one);

R_{200} is H, **R_{20}**, F, Cl, Br, I, OH, SH, alkoxy, methoxy, NH_2, $N(R)_2$, $NH(R_{10})$, $N(R_{10})(R_{11})$, CF_3, CN, NO_2, C_1-C_5 linear or branched, substituted or unsubstituted alkyl (e.g., methyl, ethyl, CH_2-CH_2-O-CH_2-CH_2-O-CH_3, CH_2-O-CH_2-CH_2-O-CH_3), C_1-C_5 linear or branched alkoxy (e.g., methoxy), C_1-C_5 linear or branched haloalkyl (e.g., CHF_2, CF_3, CF_2CH_3, CH_2CF_3, $CF_2CH_2CH_3$, $CH_2CH_2CF_3$, $CF_2CH(CH_3)_2$,$CF(CH_3)$-$CH(CH_3)_2$), R_8-aryl (e.g., CH_2-Ph), -R_8-O-R_8-O-R_{10} (e.g. $(CH_2)_2$-O-$(CH_2)_2$-O-CH_3), -R_8-O-R_{10}, -R_8-R_{10} (e.g., $(CH_2)_2$-O-CH_3), substituted or unsubstituted aryl (e.g., phenyl), substituted or unsubstituted heteroaryl (e.g., pyridine (2, 3, and 4-pyridine);

or **R_{200}** and the carbon atom to which it is connected are C=O, C=N-O(R) (e.g, C=N-O-CH_3) or $C(R)_2$ (e.g., $C(CH_3)_2$, CF_2);

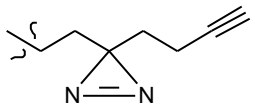
R_5 is H or C_1-C_5 linear or branched alkyl (e.g. methyl)**;**

R_6 is H, C_1-C_5 linear or branched alkyl (e.g., methyl, ethyl, iso-propyl), CD_3, or substituted or unsubstituted, saturated or unsaturated, single, fused, bridged or spiro 3-10 membered carbocyclic or heterocyclic ring (e.g., piperidine (2, 3, or 4-piperidine), 1-methylpiperidine (1-methyl-3-piperidine, 1-methyl-4-piperidine), 3-fluoro-1-methylpiperidine, 1-(2,2,2-trifluoroethyl)piperidine, azetidine, 1-methyl-azetidine (1-methyl-3-azetidine), morpholine, pyrrolidine, pyrrolidinone, quinuclidine, tetrahydropyran (4 or 3-tetrahydropyrane), tetrahydrofurane, azaspiro[3.3]heptane, 8-methyl-8-azabicyclo[3.2.1]octane, dioxane, 1,3-dioxane, imidazole, trifluoromethyl-oxetane, hydroxy-tetrahydrofurane, azepan-2-one, azabicyclohexane, 4,4-difluorocyclohexane, cyclopropyl);

R_7' and **R_7''** are each independently H, F, Cl, Br, I, OH, O-R_{20}, SH, R_8-OH, R_8-SH, -R_8-O-R_{10}, R_8-(C_3-C_8 cycloalkyl), R_8-(3-8 membered heterocyclic ring), CF_3, CD_3, OCD_3, CN, NO_2, -CH_2CN, -R_8CN, NH_2, NHR, $N(R)_2$, $NH(R_{10})$, $N(R_{10})(R_{11})$, R_8-$N(R_{10})(R_{11})$, R_9-R_8-$N(R_{10})(R_{11})$, $B(OH)_2$, -$OC(O)CF_3$, -OCH_2Ph, $NHC(O)$-R_{10}, $NHCO$-$N(R_{10})(R_{11})$, COOH, -C(O)Ph, $C(O)O$-R_{10}, R_8-C(O)-R_{10}, C(O)H, C(O)-R_{10}, C_1-C_5 linear or branched C(O)-haloalkyl, -$C(O)NH_2$, C(O)NHR, $C(O)N(R_{10})(R_{11})$, SO_2R, $SO_2N(R_{10})(R_{11})$, $CH(CF_3)(NH$-$R_{10})$, C_1-C_5 linear or branched, substituted or unsubstituted alkyl (e.g., isopropyl, methyl, ethyl), C_1-C_5 linear or branched, substituted or unsubstituted alkenyl, C_1-C_5 linear or branched, or C_3-C_8 cyclic haloalkyl (e.g., CHF_2), C_1-C_5 linear or branched, or C_3-C_8 cyclic alkoxy (e.g. methoxy), optionally wherein at least one methylene group (CH_2) in the alkoxy is replaced with an oxygen atom, C_1-C_5 linear or branched thioalkoxy, C_1-C_5 linear or branched haloalkoxy, C_1-C_5 linear or branched alkoxyalkyl, substituted or unsubstituted C_3-C_8 cycloalkyl (e.g., cyclopropyl, cyclohexyl), substituted or unsubstituted 3-8 membered heterocyclic ring (e.g., morpholine, pyran, oxetane, pyrrolidine, 3,3-difluoropyrrolidine, imidazole, pyrazole, triazole, piperazine, piperidine, piperidin-2-one, piperidin-4-ol, dioxazole, 2-oxopyrrolidine), substituted or unsubstituted aryl, substituted or unsubstituted benzyl;

or **R_7'** and **R_7''** are joined to form a 3-8 membered substituted or unsubstituted, saturated, unsaturated or aromatic, carbocyclic or heterocyclic ring (e.g., cyclopentyl, cyclohexyl, piperidine, tetrahydrofuran, tetrahydropyran, pyrrolidine);

$\mathbf{R_{20}}$ is represented by the following structure:



R is H, F, Cl, Br, I, OH, SH, alkoxy, $NH(R_{10})$, NH-CH_2-cyclopropyl, $N(R_{10})(R_{11})$, CF_3, CN, NO_2, COOH, C_1-C_5 linear or branched, substituted or unsubstituted alkyl (e.g., methyl, ethyl, CH_2-OH, CH_2-CH_2-OH, CH_2-CH_2-O-CH_2-CH_2-O-CH_3, CH_2-O-CH_2-CH_2-O-CH_3), C_3-C_8 substituted or unsubstituted cycloalkyl, cyclopropyl, C_1-C_5 linear or branched alkoxy, isopropoxy, C_1-C_5 linear or branched haloalkyl (e.g., CHF_2, CF_3, CF_2CH_3, CH_2CF_3, $CF_2CH_2CH_3$, $CH_2CH_2CF_3$, $CF_2CH(CH_3)_2$,$CF(CH_3)$-$CH(CH_3)_2$), R_8-aryl (e.g., CH_2-Ph), -R_8-O-R_8-O-R_{10} (e.g. $(CH_2)_2$-O-$(CH_2)_2$-O-CH_3), -R_8-O-R_{10}, -R_8-R_{10} (e.g., $(CH_2)_2$-O-CH_3), substituted or unsubstituted aryl (e.g., phenyl), substituted or unsubstituted heteroaryl (e.g., pyridine (2, 3, and 4-pyridine);

$\mathbf{R_{30}}$ is H, $\mathbf{R_{20}}$, F, Cl, Br, I, OH, SH, alkoxy, $N(R)_2$, $NH(R_{10})$, $N(R_{10})(R_{11})$, CF_3, CN, NO_2, C_1-C_5 linear or branched, substituted or unsubstituted alkyl (e.g., methyl, ethyl, CH_2-CH_2-O-CH_2-CH_2-O-CH_3, CH_2-O-CH_2-CH_2-O-CH_3), C_1-C_5 linear or branched alkoxy, C_1-C_5 linear or branched haloalkyl (e.g., CHF_2, CF_3, CF_2CH_3, CH_2CF_3, $CF_2CH_2CH_3$, $CH_2CH_2CF_3$, $CF_2CH(CH_3)_2$,$CF(CH_3)$-$CH(CH_3)_2$), R_8-aryl (e.g., CH_2-Ph), -R_8-O-R_8-O-R_{10} (e.g. $(CH_2)_2$-O-$(CH_2)_2$-O-CH_3), -R_8-O-R_{10}, -R_8-R_{10} (e.g., $(CH_2)_2$-O-CH_3), substituted or unsubstituted aryl (e.g., phenyl), substituted or unsubstituted heteroaryl (e.g., pyridine (2, 3, and 4-pyridine);

each $\mathbf{R_8}$ is independently $[\mathbf{CH_2}]_p$

wherein **p** is between 1 and 10;

$\mathbf{R_9}$ is $[CH]_q$, $[C]_q$

wherein **q** is between 2 and 10;

$\mathbf{R_{10}}$ and $\mathbf{R_{11}}$ are each independently H, C_1-C_5 substituted or unsubstituted linear or branched alkyl (e.g., methyl, ethyl, CH_2-cyclopropyl, CH_2-CH_2-O-CH_3), C_1-C_5 substituted or unsubstituted linear or branched haloalky (e.g., CH_2CF_3), C_1-C_5 linear or branched alkoxy (e.g., O-CH_3), $\mathbf{R_{20}}$, C(O)R, or $S(O)_2R$;

or $\mathbf{R_{10}}$ and $\mathbf{R_{11}}$ are joined to form a substituted or unsubstituted 3-8 membered heterocyclic ring (e.g., piperazine, piperidine),

n is an integer between 0 and 4 (e.g., 1, 2);

or its pharmaceutically acceptable salt, stereoisomer, tautomer, hydrate, *N*-oxide, reverse amide analog, prodrug, isotopic variant (e.g., deuterated analog), PROTAC, pharmaceutical product or any combination thereof.

6. The compound of claim 5, wherein

$\mathbf{X_2}$ and $\mathbf{X_3}$ are CH;

$\mathbf{X_4}$ is CH or nitrogen;

Ring W is a 3-10 membered single, saturated, heterocyclic ring, preferably morpholine (e.g., 2 or 3-morpholine), tetrahydrofuran, tetrahydropyran, pyrrolidine, isoxazolidine, piperazine, piperidine;

3-10 membered single, unsaturated, heterocyclic ring, preferably piperazine-2-one;

3-10 membered spiro, heterocyclic ring, preferably 4-azaspiro[2.4]heptane, 2-oxa-5-azaspiro[3.4]octane, 1,4-dioxa-6-azaspiro[4.4]nonane, 4,7-diazaspiro[2.5]octane;

3-10 membered bridged, heterocyclic ring, preferably bicyclo[1.1.1]pentane, 2,5-diazabicyclo[2.2.1]heptane;

or 3-10 membered single, unsaturated heterocyclic ring, preferably pyrrolidin-2-one, pyrrolidin-3-one, piperazine-2-one, piperidine-2-one, pyrrolidin-3-one-O-methyloxime;

$\mathbf{R_{200}}$ is H, OH, CN, NH_2, C_1-C_5 linear or branched, substituted or unsubstituted alkyl, C_1-C_5 linear or branched alkoxy (e.g., methoxy), C_1-C_5 linear or branched haloalkyl (e.g., CHF_2); or $\mathbf{R_{200}}$ and the carbon atom to which it is connected are C=O, C=N-O(R) (e.g, C=N-O-CH_3) or $C(R)_2$ (e.g., $C(CH_3)_2$, CF_2);

$\mathbf{R_5}$ is H or C_1-C_5 linear or branched alkyl (e.g. methyl)**;**

$\mathbf{R_6}$ is H, C_1-C_5 linear or branched, substituted or unsubstituted alkyl, preferably methyl, ethyl, or iso-propyl, CD_3,

a substituted or unsubstituted saturated single, 3-10 membered heterocyclic ring, preferably piperidine (e.g., 2, 3, or 4-piperidine), 1-methylpiperidine (e.g., 1-methyl-3-piperidine, 1-methyl-4-piperidine), 3-fluoro-1-methylpiperidine, 1-(2,2,2-trifluoroethyl)piperidine, azetidine, 1-methyl-azetidine (e.g., 1-methyl-3-azetidine), morpholine, tetrahydropyran (e.g., 4 or 3-tetrahydropyrane), tetrahydrofurane, dioxane, or 1,3-dioxane

saturated bridged or spiro 3-10 membered heterocyclic ring, preferably 8-methyl-8-azabicyclo[3.2.1]octane,

or substituted or unsubstituted, saturated single, 3-10 membered carbocyclic ring (i.e., cycloalkyl), preferably 4,4-difluorocyclohexane, cyclopropyl;

$\mathbf{R_7}$**'** and $\mathbf{R_7}$**''** are each independently H or F;

or any combination thereof.

7. The compound of claim 5 or 6, wherein the carbocyclic or heterocyclic ring as defined in $\mathbf{R_6}$ is further substituted with at least one substitution selected from: F, Cl, Br, I, C_1-C_5 linear or branched alkyl, OH, alkoxy (e.g., OMe), amide , $C(O)N(R)_2$, C(O)-alkyl, C(O)-pyrrolidine, C(O)-piperidine, $N(R)_2$, $NH(R_{10})$, $N(R_{10})(R_{11})$, $N(CH_3)_2$, NH_2, CF_3, aryl, phenyl, heteroaryl, substituted or unsubstituted C_3-C_8 cycloalkyl (e.g., cyclobutanol), substituted or unsubstituted 3-8 membered heterocyclic ring (e.g., pyran, oxetane, piperidine, pyrazole, triazole, imidazole), C_1-C_5 linear or branched haloalkyl (e.g., CH_2CF_3, CHF_2), halophenyl, (benzyloxy)phenyl, CN, and NO_2.

8. The compound of any one of claims 5-7, wherein the substituted or unsubstituted ring of $\mathbf{R_6}$ is piperidine (e.g., 2, 3, or 4-piperidine), 1-methylpiperidine (e.g., 1-methyl-3-piperidine, 1-methyl-4-

piperidine), 3-fluoro-1-methylpiperidine, 1-(2,2,2-trifluoroethyl)piperidine, azetidine, 1-methyl-azetidine (e.g., 1-methyl-3-azetidine), morpholine, tetrahydropyran (e.g., 4 or 3-tetrahydropyrane), tetrahydrofurane, dioxane, or 1,3-dioxane, 8-methyl-8-azabicyclo[3.2.1]octane, 4,4-difluorocyclohexane, or cyclopropyl.

9. The compound of any one of claims 5-8, selected from the following:

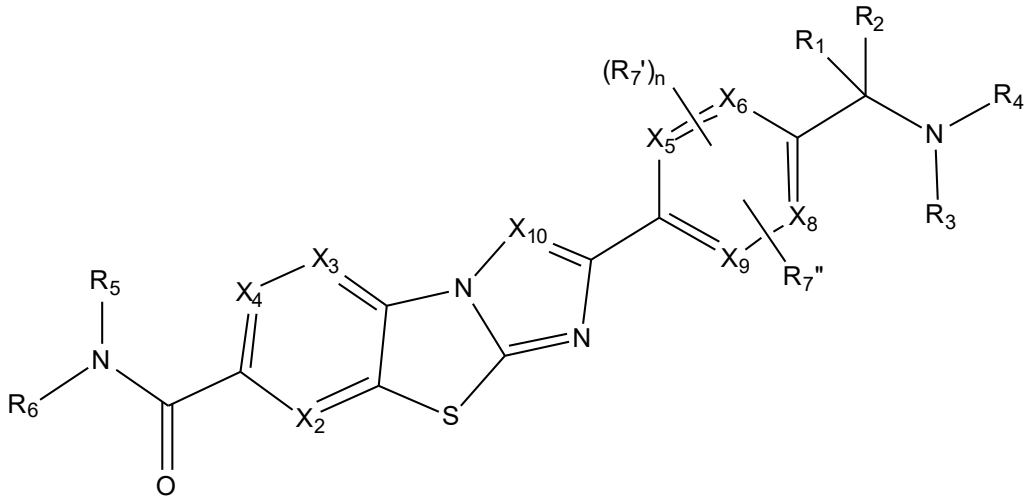
Compound No.	Compound Name
491R	*2-(2-fluoro-4-(pyrrolidin-2-yl)phenyl)-N-((R)-1-methylpiperidin-3-yl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
491S	*2-(2-fluoro-4-(pyrrolidin-2-yl)phenyl)-N-((S)-1-methylpiperidin-3-yl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
492	*2-(2-fluoro-4-(pyrrolidin-2-yl)phenyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
498	*2-(2-fluoro-4-(pyrrolidin-2-yl)phenyl)-N-methylbenzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
499	*2-(2-fluoro-4-(pyrrolidin-2-yl)phenyl)-N,N-dimethylbenzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
500	*2-(2-fluoro-4-(pyrrolidin-2-yl)phenyl)-N-(1-methylpiperidin-4-yl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
503S	*(S)-2-(2-fluoro-4-(pyrrolidin-2-yl)phenyl)-N-(1-methylpiperidin-4-yl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
503R	*(R)-2-(2-fluoro-4-(pyrrolidin-2-yl)phenyl)-N-(1-methylpiperidin-4-yl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
504	*2-(2-fluoro-4-(pyrrolidin-3-yl)phenyl)-N-methylbenzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
505	*2-(2-fluoro-4-(pyrrolidin-3-yl)phenyl)-N-(1-methylpiperidin-4-yl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
506	*2-(2-fluoro-4-(pyrrolidin-2-yl)phenyl)-N-(1-methylazetidin-3-yl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
510	*2-(2-fluoro-4-(pyrrolidin-2-yl)phenyl)-N-(tetrahydro-2H-pyran-4-yl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
511	*2-(2-fluoro-4-(pyrrolidin-3-yl)phenyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
514	*2-(2-fluoro-4-(pyrrolidin-2-yl)phenyl)imidazo[2',1':2,3]thiazolo[4,5-c]pyridine-7-carboxamide*
515	*2-(2-fluoro-4-(pyrrolidin-2-yl)phenyl)-N-methylimidazo[2',1':2,3]thiazolo[4,5-c]pyridine-7-carboxamide*
517	*2-(2-fluoro-4-(morpholin-3-yl)phenyl)-N-(1-methylpiperidin-4-yl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
518	*2-(2-fluoro-4-((3S,4R)-4-hydroxypyrrolidin-3-yl)phenyl)-N-methylbenzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
519	*2-(2-fluoro-4-(morpholin-2-yl)phenyl)-N-(1-methylpiperidin-4-yl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
520	*2-(2-fluoro-4-((2S,4S)-4-hydroxypyrrolidin-2-yl)phenyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
521	*2-(2-fluoro-4-((2S,4S)-4-hydroxypyrrolidin-2-yl)phenyl)-N-methylbenzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
522S	*2-(2-fluoro-4-((2S,4S)-4-hydroxypyrrolidin-2-yl)phenyl)-N-(1-methylpiperidin-4-yl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
522R	*2-(2-fluoro-4-((2S,4R)-4-hydroxypyrrolidin-2-yl)phenyl)-N-(1-methylpiperidin-4-yl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*

524S	*2-(2-fluoro-4-(pyrrolidin-2-yl)phenyl)-N-((S)-tetrahydrofuran-3-yl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
524R	*2-(2-fluoro-4-(pyrrolidin-2-yl)phenyl)-N-((R)-tetrahydrofuran-3-yl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
525	*2-(2-fluoro-4-(pyrrolidin-2-yl)phenyl)-N-(tetrahydro-2H-pyran-3-yl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
526	*N-((3S,4R)-3-fluoro-1-methylpiperidin-4-yl)-2-(2-fluoro-4-(pyrrolidin-2-yl)phenyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
527	*2-(2-fluoro-4-(piperidin-4-yl)phenyl)-N-(1-methylpiperidin-4-yl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
528	*2-(2-fluoro-4-(4-hydroxypiperidin-4-yl)phenyl)-N-(1-methylpiperidin-4-yl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
529	*2-(2-fluoro-4-(piperidin-4-yl)phenyl)-N-(tetrahydro-2H-pyran-4-yl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
530	*2-(2-fluoro-4-(3-hydroxypyrrolidin-3-yl)phenyl)-N-(1-methylpiperidin-4-yl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
531	*2-(2-fluoro-4-(pyrrolidin-2-yl)phenyl)-N-(8-methyl-8-azabicyclo[3.2.1]octan-3-yl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
532	*2-(2-fluoro-4-((2S,4S)-4-methoxypyrrolidin-2-yl)phenyl)-N-(1-methylpiperidin-4-yl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
533	*2-(2-fluoro-4-((2S,4S)-4-hydroxypyrrolidin-2-yl)phenyl)-N-(tetrahydro-2H-pyran-4-yl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
534	*2-(2-fluoro-4-(morpholin-3-yl)phenyl)-N-(tetrahydro-2H-pyran-4-yl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
535	*2-(2-fluoro-4-(morpholin-2-yl)phenyl)-N-(tetrahydro-2H-pyran-4-yl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
536	*2-(2-fluoro-4-(4-fluoropiperidin-4-yl)phenyl)-N-(1-methylpiperidin-4-yl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
537	*2-(2-fluoro-4-(4-oxopyrrolidin-2-yl)phenyl)-N-(tetrahydro-2H-pyran-4-yl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
538	*2-(2-fluoro-4-((2S,4R)-4-hydroxypyrrolidin-2-yl)phenyl)-N-(tetrahydro-2H-pyran-4-yl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
540	*2-(4-(4-(difluoromethyl)pyrrolidin-2-yl)-2-fluorophenyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
541	*2-(4-(4-cyanopyrrolidin-2-yl)-2-fluorophenyl)-N-(1-methylpiperidin-4-yl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
544	*2-(2-fluoro-4-((2S,4R)-4-hydroxypyrrolidin-2-yl)phenyl)-N-methylbenzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
545	*N-(1,3-dioxan-5-yl)-2-(2-fluoro-4-(pyrrolidin-2-yl)phenyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
546	*2-(2-fluoro-4-(3-hydroxypiperidin-4-yl)phenyl)-N-(1-methylpiperidin-4-yl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
547	*2-(2-fluoro-4-(piperazin-1-yl)phenyl)-N-(1-methylpiperidin-4-yl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
548	*N-(2-(2-fluoro-4-(pyrrolidin-2-yl)phenyl)benzo[d]imidazo[2,1-b]thiazol-7-yl)acetamide*
549R	*(R)-2-(2-fluoro-4-(pyrrolidin-2-yl)phenyl)-N-methylimidazo[2',1':2,3]thiazolo[4,5-c]pyridine-7-carboxamide*
549S	*(S)-2-(2-fluoro-4-(pyrrolidin-2-yl)phenyl)-N-methylimidazo[2',1':2,3]thiazolo[4,5-c]pyridine-7-carboxamide*
550	*2-(4-(5,5-dimethylpyrrolidin-2-yl)-2-fluorophenyl)-N-(tetrahydro-2H-pyran-4-yl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
551	*2-(2-fluoro-4-(4-azaspiro[2.4]heptan-5-yl)phenyl)-N-(tetrahydro-2H-pyran-4-yl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*

552	*2-(2-fluoro-4-(pyrrolidin-2-yl)phenyl)-N-(tetrahydro-2H-pyran-4-yl)imidazo[2',1':2,3]thiazolo[4,5-c]pyridine-7-carboxamide*
553	*2-(2-fluoro-4-(morpholin-2-yl)phenyl)-N-(tetrahydro-2H-pyran-4-yl)imidazo[2',1':2,3]thiazolo[4,5-c]pyridine-7-carboxamide*
554	*2-(2-fluoro-4-(4-hydroxypyrrolidin-2-yl)phenyl)-N-(tetrahydro-2H-pyran-4-yl)imidazo[2',1':2,3]thiazolo[4,5-c]pyridine-7-carboxamide*
555	*2-(2-fluoro-4-(4-hydroxypyrrolidin-2-yl)phenyl)-N-methylimidazo[2',1':2,3]thiazolo[4,5-c]pyridine-7-carboxamide*
556	*2-(2-fluoro-4-(4-methoxypyrrolidin-2-yl)phenyl)-N-methylimidazo[2',1':2,3]thiazolo[4,5-c]pyridine-7-carboxamide*
557	*2-(2-fluoro-4-(morpholin-2-yl)phenyl)-N-methylimidazo[2',1':2,3]thiazolo[4,5-c]pyridine-7-carboxamide*
566	*2-(2-fluoro-4-(4-methoxypyrrolidin-2-yl)phenyl)-N-(tetrahydro-2H-pyran-4-yl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
567	*2-(2-fluoro-4-(pyrrolidin-2-yl)phenyl)-N-(methyl-d3)imidazo[2',1':2,3]thiazolo[4,5-c]pyridine-7-carboxamide*
568	*(Z)-2-(2-fluoro-4-(4-(methoxyimino)pyrrolidin-2-yl)phenyl)-N-(tetrahydro-2H-pyran-4-yl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
569	*2-(2-fluoro-4-(2-oxa-6-azaspiro[3.4]octan-7-yl)phenyl)-N-methylimidazo[2',1':2,3]thiazolo[4,5-c]pyridine-7-carboxamide*
570	*2-(2-fluoro-4-(2-oxa-6-azaspiro[3.4]octan-7-yl)phenyl)-N-(tetrahydro-2H-pyran-4-yl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
571	*2-(2-fluoro-4-(1,4-dioxa-7-azaspiro[4.4]nonan-8-yl)phenyl)-N-(tetrahydro-2H-pyran-4-yl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
572	*N-ethyl-2-(2-fluoro-4-(pyrrolidin-2-yl)phenyl)imidazo[2',1':2,3]thiazolo[4,5-c]pyridine-7-carboxamide*
573	*2-(2-fluoro-4-(pyrrolidin-2-yl)phenyl)-N-(1-(2,2,2-trifluoroethyl)piperidin-4-yl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
574	*N-(4,4-difluorocyclohexyl)-2-(2-fluoro-4-(pyrrolidin-2-yl)phenyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
575	*2-(2-fluoro-4-(pyrrolidin-2-yl)phenyl)-N-isopropylimidazo[2',1':2,3]thiazolo[4,5-c]pyridine-7-carboxamide*
576	*N-cyclopropyl-2-(2-fluoro-4-(pyrrolidin-2-yl)phenyl)imidazo[2',1':2,3]thiazolo[4,5-c]pyridine-7-carboxamide*
577	*2-(4-(5,5-dimethylmorpholin-2-yl)-2-fluorophenyl)-N-(tetrahydro-2H-pyran-4-yl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
578	*2-(2-fluoro-4-(1-methylpiperazin-2-yl)phenyl)-N-(tetrahydro-2H-pyran-4-yl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
581	*2-(2-fluoro-4-(4,7-diazaspiro[2.5]octan-7-yl)phenyl)-N-(tetrahydro-2H-pyran-4-yl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
582	*2-(4-(3-aminobicyclo[1.1.1]pentan-1-yl)-2-fluorophenyl)-N-(tetrahydro-2H-pyran-4-yl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
583	*2-(2-fluoro-4-(6-oxopiperazin-2-yl)phenyl)-N-(tetrahydro-2H-pyran-4-yl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
584	*2-(4-(1-aminocyclopropyl)-2-fluorophenyl)-N-(tetrahydro-2H-pyran-4-yl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
585	*2-(4-(1-aminocyclopropyl)-2-fluorophenyl)-N-methylimidazo[2',1':2,3]thiazolo[4,5-c]pyridine-7-carboxamide*
586	*2-(2-fluoro-4-(1-methylpyrrolidin-2-yl)phenyl)-N-(tetrahydro-2H-pyran-4-yl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
587	*2-(6-(pyrrolidin-2-yl)pyridin-3-yl)-N-(tetrahydro-2H-pyran-4-yl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
588	*2-(2-fluoro-4-(piperazin-1-yl)phenyl)-N-(tetrahydro-2H-pyran-4-yl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*

589	*2-(2-fluoro-4-(piperazin-1-yl)phenyl)-N-methylimidazo[2',1':2,3]thiazolo[4,5-c]pyridine-7-carboxamide*
590	*2-(2-fluoro-4-(2-oxopiperazin-1-yl)phenyl)-N-(tetrahydro-2H-pyran-4-yl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
591	*2-(4-(2,5-diazabicyclo[2.2.1]heptan-2-yl)-2-fluorophenyl)-N-methylimidazo[2',1':2,3]thiazolo[4,5-c]pyridine-7-carboxamide*
592	*2-(4-(2,5-diazabicyclo[2.2.1]heptan-2-yl)-2-fluorophenyl)-N-(tetrahydro-2H-pyran-4-yl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
593	*N-(2-(2-fluoro-4-(pyrrolidin-2-yl)phenyl)benzo[d]imidazo[2,1-b]thiazol-7-yl)-1-methylpiperidine-4-carboxamide*
594	*N-(2-(2-fluoro-4-(pyrrolidin-2-yl)phenyl)benzo[d]imidazo[2,1-b]thiazol-7-yl)tetrahydro-2H-pyran-4-carboxamide*

10. A compound represented by the structure of formula **I(o):**



I(o)

wherein

X_2, **X_3**, and **X_4** are each independently nitrogen or CH;

X_5 , **X_6** , **X_7**, **X_8** and **X_9** are each independently nitrogen or carbon atoms;

X_{10} is N, CH, or C(R) (e.g., $C(CH_2)OH$, $C(CH_2)_2OH$, C(NH-CH_2-cyclopropyl), $C(CH_3)$, C(cyclopropyl), C(isopropoxy), C(COOH));

R_1 is H, F, Cl, Br, I, OH, SH, or CF_3, substituted or unsubstituted C_1-C_5 alkyl (e.g., CH_2OH), C_1-C_5 linear or branched, or C_3-C_8 cyclic haloalkyl, substituted or unsubstituted C_1-C_5 linear or branched, or C_3-C_8 cyclic alkoxy;

R_2 is substituted or unsubstituted C_1-C_5 alkyl (e.g., CH_2OH, CH_2OCH_3), 3-8 membered carbocyclic or heterocyclic ring (e.g., oxetane);

or **R_1** and **R_2** are joined to form a 3-8 membered carbocyclic or heterocyclic ring (e.g., cyclopropyl, oxetane);

R_3 and **R_4** are each independently H, Me, substituted or unsubstituted C_1-C_5 alkyl (e.g., methoxyethylene, methylaminoethyl, aminoethyl), -R_8-O-R_{10} (e.g., $(CH_2)_2$-O-CH_3), R_8-N(R_{10})(R_{11}) (e.g., $(CH_2)_2$-NH(CH_3)), substituted or unsubstituted C_3-C_8 cycloalkyl (e.g., cyclopropyl), substituted or unsubstituted 5-7 membered heterocyclic ring (e.g., pyrrolidine, methylpyrrolidine, piperidine), or R_{20}; or

R_3 and **R_4** are joined to form a 3-8 membered heterocyclic ring (e.g., pyrrolidine, , pyrrolidone, 2-oxopyrrolidine, piperidine, morpholine, piperazine, imidazole);

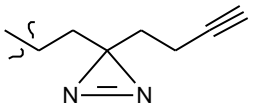
R_5 is H or C_1-C_5 linear or branched alkyl (e.g. methyl)**;**

R_6 is H, C_1-C_5 linear or branched alkyl (e.g., methyl, ethyl), substituted or unsubstituted, saturated or unsaturated, single fused, bridged or spiro 3-10 membered heterocyclic ring (e.g., piperidine, 1-methylpiperidine, 3-fluoro-1-methylpiperidine, azetidine, 1-methyl-azetidine, morpholine, pyrrolidine, pyrrolidinone, quinuclidine, tetrahydropyran, tetrahydrofurane, azaspiro[3.3]heptane, 8-methyl-8-azabicyclo[3.2.1]octane, dioxane, 1,3-dioxane, imidazole, trifluoromethyl-oxetane, hydroxy-tetrahydrofurane, azepan-2-one, azabicyclohexane) or $(CH_2)_3$-4-fluoro-piperidine;

R_7' and **R_7''** are each independently H, F, Cl, Br, I, OH, O-R_{20}, SH, R_8-OH, R_8-SH, -R_8-O-R_{10}, R_8-(C_3-C_8 cycloalkyl), R_8-(3-8 membered heterocyclic ring), CF_3, CD_3, OCD_3, CN, NO_2, -CH_2CN, -R_8CN, NH_2, NHR, $N(R)_2$, $NH(R_{10})$, $N(R_{10})(R_{11})$, R_8-$N(R_{10})(R_{11})$, R_9-R_8-$N(R_{10})(R_{11})$, $B(OH)_2$, -$OC(O)CF_3$, -OCH_2Ph, $NHC(O)$-R_{10}, $NHCO$-$N(R_{10})(R_{11})$, COOH, -C(O)Ph, $C(O)O$-R_{10}, R_8-$C(O)$-R_{10}, C(O)H, $C(O)$-R_{10}, C_1-C_5 linear or branched C(O)-haloalkyl, $-C(O)NH_2$, C(O)NHR, $C(O)N(R_{10})(R_{11})$, SO_2R, $SO_2N(R_{10})(R_{11})$, $CH(CF_3)(NH$-$R_{10})$, C_1-C_5 linear or branched, substituted or unsubstituted alkyl (e.g., isopropyl, methyl, ethyl), C_1-C_5 linear or branched, substituted or unsubstituted alkenyl, C_1-C_5 linear or branched, or C_3-C_8 cyclic haloalkyl (e.g., CHF_2), C_1-C_5 linear or branched, or C_3-C_8 cyclic alkoxy (e.g. methoxy), optionally wherein at least one methylene group (CH_2) in the alkoxy is replaced with an oxygen atom, C_1-C_5 linear or branched thioalkoxy, C_1-C_5 linear or branched haloalkoxy, C_1-C_5 linear or branched alkoxyalkyl, substituted or unsubstituted C_3-C_8 cycloalkyl (e.g., cyclopropyl, cyclohexyl), substituted or unsubstituted 3-8 membered heterocyclic ring (e.g., morpholine, pyran, oxetane, pyrrolidine, 3,3-difluoropyrrolidine, imidazole, pyrazole, triazole, piperazine, piperidine, piperidin-2-one, piperidin-4-ol, dioxazole, 2-oxopyrrolidine), substituted or unsubstituted aryl, substituted or unsubstituted benzyl;

or **R_7'** and **R_7''** are joined to form a 3-8 membered substituted or unsubstituted, saturated, unsaturated or aromatic, carbocyclic or heterocyclic ring (e.g., cyclopentyl, cyclohexyl, piperidine, tetrahydrofuran, tetrahydropyran, pyrrolidine);

R_{20} is represented by the following structure:



R is H, F, Cl, Br, I, OH, SH, alkoxy, $NH(R_{10})$, NH-CH_2-cyclopropyl, $N(R_{10})(R_{11})$, CF_3, CN, NO_2, COOH, C_1-C_5 linear or branched, substituted or unsubstituted alkyl (e.g., methyl, ethyl, CH_2-OH, CH_2-CH_2-OH, CH_2-CH_2-O-CH_2-CH_2-O-CH_3, CH_2-O-CH_2-CH_2-O-CH_3), C_3-C_8 substituted or unsubstituted cycloalkyl, cyclopropyl, C_1-C_5 linear or branched alkoxy, isopropoxy, C_1-C_5 linear or branched haloalkyl (e.g., CHF_2, CF_3, CF_2CH_3, CH_2CF_3, $CF_2CH_2CH_3$, $CH_2CH_2CF_3$, $CF_2CH(CH_3)_2$,$CF(CH_3)$-$CH(CH_3)_2$), R_8-aryl (e.g., CH_2-Ph), -R_8-O-R_8-O-R_{10} (e.g. $(CH_2)_2$-O-$(CH_2)_2$-O-

CH_3), -R_8-O-R_{10}, -R_8-R_{10} (e.g., $(CH_2)_2$-O-CH_3), substituted or unsubstituted aryl (e.g., phenyl), substituted or unsubstituted heteroaryl (e.g., pyridine (2, 3, and 4-pyridine);

R_{30} is H, **R_{20}**, F, Cl, Br, I, OH, SH, alkoxy, N(R)$_2$, NH(R_{10}), N(R_{10})(R_{11}), CF_3, CN, NO_2, C_1-C_5 linear or branched, substituted or unsubstituted alkyl (e.g., methyl, ethyl, CH_2-CH_2-O-CH_2-CH_2-O-CH_3, CH_2-O-CH_2-CH_2-O-CH_3), C_1-C_5 linear or branched alkoxy, C_1-C_5 linear or branched haloalkyl (e.g., CHF_2, CF_3, CF_2CH_3, CH_2CF_3, $CF_2CH_2CH_3$, $CH_2CH_2CF_3$, $CF_2CH(CH_3)_2$,$CF(CH_3)$-$CH(CH_3)_2$), R_8-aryl (e.g., CH_2-Ph), -R_8-O-R_8-O-R_{10} (e.g. $(CH_2)_2$-O-$(CH_2)_2$-O-CH_3), -R_8-O-R_{10}, -R_8-R_{10} (e.g., $(CH_2)_2$-O-CH_3), substituted or unsubstituted aryl (e.g., phenyl), substituted or unsubstituted heteroaryl (e.g., pyridine (2, 3, and 4-pyridine);

each **R_8** is independently $[\mathbf{CH_2}]_p$

wherein **p** is between 1 and 10;

R_9 is $[CH]_q$, $[C]_q$

wherein **q** is between 2 and 10;

R_{10} and **R_{11}** are each independently H, C_1-C_5 substituted or unsubstituted linear or branched alkyl (e.g., methyl, ethyl, CH_2-cyclopropyl, CH_2-CH_2-O-CH_3), C_1-C_5 substituted or unsubstituted linear or branched haloalky (e.g., CH_2CF_3), C_1-C_5 linear or branched alkoxy (e.g., O-CH_3), **R_{20}**, C(O)R, or S(O)$_2$R;

or **R_{10}** and **R_{11}** are joined to form a substituted or unsubstituted 3-8 membered heterocyclic ring (e.g., piperazine, piperidine),

n is an integer between 0 and 4 (e.g., 1, 2);

or its pharmaceutically acceptable salt, stereoisomer, tautomer, hydrate, *N*-oxide, reverse amide analog, prodrug, isotopic variant (e.g., deuterated analog), PROTAC, pharmaceutical product or any combination thereof.

11. The compound of claim 10, wherein

R_1 is H;

R_2 is a substituted C_1-C_5 alkyl (e.g., CH_2OH, CH_2OCH_3), or 3-8 membered heterocyclic ring (e.g., oxetane);

R_3 and **R_4** are each independently H;

R_5 is H or C_1-C_5 linear or branched alkyl (e.g. methyl)**;**

R_6 is C_1-C_5 linear or branched alkyl (e.g., methyl, ethyl), $(CH_2)_3$-4-fluoro-piperidine, or tetrahydropyran;

R_7' is F;

R_7'' is H**;**

n is 1;

or any combination thereof.

12. The compound of claim 10 or 11, wherein the compound is represented by the structure of any one of the following compounds:

Compound No.	Compound Name
539	*2-(4-(1-amino-2-hydroxyethyl)-2-fluorophenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
558	*2-(4-(1-amino-2-hydroxyethyl)-2-fluorophenyl)-N-methylimidazo[2',1':2,3]thiazolo[4,5-c]pyridine-7-carboxamide*
559	*2-(4-(1-amino-2-hydroxyethyl)-2-fluorophenyl)-N-methylbenzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
560	*2-(4-(1-amino-2-hydroxyethyl)-2-fluorophenyl)-N-(tetrahydro-2H-pyran-4-yl)imidazo[2',1':2,3]thiazolo[4,5-c]pyridine-7-carboxamide*
561	*2-(4-(1-amino-2-hydroxyethyl)-2-fluorophenyl)-N-(tetrahydro-2H-pyran-4-yl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
562	*2-(4-(1-amino-2-methoxyethyl)-2-fluorophenyl)-N-methylimidazo[2',1':2,3]thiazolo[4,5-c]pyridine-7-carboxamide*
563	*2-(4-(1-amino-2-methoxyethyl)-2-fluorophenyl)-N-methylbenzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
564	*2-(4-(1-amino-2-methoxyethyl)-2-fluorophenyl)-N-(tetrahydro-2H-pyran-4-yl)imidazo[2',1':2,3]thiazolo[4,5-c]pyridine-7-carboxamide*
565	*2-(4-(1-amino-2-methoxyethyl)-2-fluorophenyl)-N-(tetrahydro-2H-pyran-4-yl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
579	*2-(4-(amino(oxetan-3-yl)methyl)-2-fluorophenyl)-N-(tetrahydro-2H-pyran-4-yl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
584	*2-(4-(1-aminocyclopropyl)-2-fluorophenyl)-N-(tetrahydro-2H-pyran-4-yl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
585	*2-(4-(1-aminocyclopropyl)-2-fluorophenyl)-N-methylimidazo[2',1':2,3]thiazolo[4,5-c]pyridine-7-carboxamide*

13. A compound represented by the structure of any one of the following compounds:

Compound No.	Compound Name
423S	*(S)-2-(2-fluoro-4-(pyrrolidin-2-yl)phenyl)-N-(3-(2-oxopiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
423R	*(R)-2-(2-fluoro-4-(pyrrolidin-2-yl)phenyl)-N-(3-(2-oxopiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
424	*N-(3-(4-cyanopiperidin-1-yl)propyl)-2-(2-fluoro-4-(pyrrolidin-2-yl)phenyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
426	*2-(2-fluoro-4-(pyrrolidin-2-yl)phenyl)-N-(3-(4-(trifluoromethyl)piperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
431S	*N-(3-(6-fluoro-3-azabicyclo[3.1.1]heptan-3-yl)propyl)-2-(2-fluoro-4-((S)-pyrrolidin-2-yl)phenyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
431R	*N-(3-(6-fluoro-3-azabicyclo[3.1.1]heptan-3-yl)propyl)-2-(2-fluoro-4-((R)-pyrrolidin-2-yl)phenyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
437S	*(S)-2-(2-fluoro-5-(pyrrolidin-2-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
437R	*(R)-2-(2-fluoro-5-(pyrrolidin-2-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
438S	*(S)-2-(2-fluoro-6-(pyrrolidin-2-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
438R	*(R)-2-(2-fluoro-6-(pyrrolidin-2-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*

439S	*(S)-2-(2-fluoro-3-(pyrrolidin-2-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
439R	*(R)-2-(2-fluoro-3-(pyrrolidin-2-yl)phenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
454	*2-(6-fluoroisoindolin-5-yl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
455	*2-(7-fluoro-1,2,3,4-tetrahydroisoquinolin-6-yl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
456	*2-(6-fluoro-1,3-dihydroisobenzofuran-5-yl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
457	*2-(7-fluoroisochroman-6-yl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
458	*2-(7-fluoroindolin-6-yl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
459	*2-(4-fluoroindolin-5-yl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
460S	*(S)-2-(2-fluoro-4-(pyrrolidin-2-yl)-5,6,7,8-tetrahydronaphthalen-1-yl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
460R	*(R)-2-(2-fluoro-4-(pyrrolidin-2-yl)-5,6,7,8-tetrahydronaphthalen-1-yl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
461S	*(S)-2-(5-fluoro-7-(pyrrolidin-2-yl)-2,3-dihydro-1H-inden-4-yl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
461R	*(R)-2-(5-fluoro-7-(pyrrolidin-2-yl)-2,3-dihydro-1H-inden-4-yl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
478	*methyl 3-fluoro-4-(7-((3-(4-fluoropiperidin-1-yl)propyl)carbamoyl)benzo[d]imidazo[2,1-b]thiazol-2-yl)benzoate*
494	*2-(2-fluoro-4-propionylphenyl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
495	*N-(3-(4-fluoropiperidin-1-yl)propyl)-2-(2-methylpyridin-4-yl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
496	*2-(2-methylpyridin-4-yl)-N-(piperidin-4-yl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
497	*N-(piperidin-4-yl)-2-(m-tolyl)benzo[4,5]thiazolo[3,2-b][1,2,4]triazole-6-carboxamide*
502	*N-(piperidin-4-yl)-2-(m-tolyl)imidazo[2',1':2,3]thiazolo[4,5-c]pyridine-7-carboxamide*
580	*N-(3-(4-fluoropiperidin-1-yl)propyl)-2-(pyrrolidin-2-yl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
600	*2-(6-fluoro-1,2,3,4-tetrahydroisoquinolin-7-yl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
601	*2-(5-fluoroindolin-6-yl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*
602	*2-(6-fluoroindolin-5-yl)-N-(3-(4-fluoropiperidin-1-yl)propyl)benzo[d]imidazo[2,1-b]thiazole-7-carboxamide*

or its pharmaceutically acceptable salt, stereoisomer, tautomer, hydrate, *N*-oxide, reverse amide analog, prodrug, isotopic variant (e.g., deuterated analog), PROTAC, pharmaceutical product or any combination thereof.

14. The compound according to any one of claims 1-13, wherein the compound is a c-MYC mRNA translation modulator, a c-MYC mRNA transcription regulator, a c-MYC inhibitor or any combination thereof.

15. A pharmaceutical composition comprising the compound of any one of claims 1-14 and a pharmaceutically acceptable carrier.

16. Use of a compound according to any one of claims 1-14 or the pharmaceutical composition according to claim 15, in the preparation of a medicament for treating, suppressing, reducing the severity, reducing the risk of developing or inhibiting cancer in a subject.

17. The use of claim 16,

wherein the cancer is selected from the list of: breast cancer, ovarian carcinoma, acute myeloid leukemia, chronic myelogenous leukemia, Hodgkin's and Burkitt's lymphoma, diffuse large Bcell lymphoma, prostate cancer, colon cancer, gastric cancer, primary central nervous system lymphoma, glioblastoma, medulloblastoma, melanoma, non-small cell lung carcinoma, germinal center-derived lymphomas, esophageal squamous cell carcinoma, osteosarcoma, bladder cancer, pancreatic cancer, lung adenocarcinoma, BRAF V600E thyroid cancer, choroid plexus carcinoma, colitis-associated cancer, epithelial ovarian cancer, colorectal cancer, pancreatic cancer and uterine cancer;

wherein the cancer is early cancer, advanced cancer, invasive cancer, metastatic cancer, drug resistant cancer or any combination thereof;

wherein the subject has been previously treated with chemotherapy, immunotherapy, radiotherapy, biological therapy, surgical intervention, or any combination thereof;

wherein the compound is administered in combination with an anti-cancer therapy;

or any combination thereof.

18. The use of claim 17, wherein the anti-cancer therapy is chemotherapy, immunotherapy, radiotherapy, biological therapy, surgical intervention, or any combination thereof.

19. Use of the compound according to any one of claims 1-14 or the pharmaceutical composition according to claim 15, in the preparation of a medicament for suppressing, reducing or inhibiting tumor growth in a subject.

20. A method of modulating c-MYC mRNA translation, or regulating c-MYC mRNA transcription in a cell, comprising contacting a compound according to any one of claims 1-14 with a cell, thereby modulating c-MYC mRNA translation, or regulating c-MYC mRNA transcription in said cell.

21. The method of claim 20, wherein said method is carried out

(a) by regulating c-MYC mRNA splicing (inclusion or exclusion of untranslated region or alternative usage of exons);

(b) by regulation of c-MYC mRNA modifications;

(c) by regulation of the interaction of RNA binding protein with c-MYC mRNA thereby changing mRNA localization;

(d) by regulating c-MYC mRNA localization in the cytoplasm;

(e) by regulating ribosomes or ribosome accessory factor to c-MYC mRNA;

(f) by reducing the amount of c-MYC protein in the cell;

or any combination thereof.