



Universiteit
Leiden
The Netherlands

It's about time: novel drug discovery concepts for the molecular pharmacological characterization fo the cannabinoid CB2 receptor

Bouma, J.

Citation

Bouma, J. (2024, September 11). *It's about time: novel drug discovery concepts for the molecular pharmacological characterization fo the cannabinoid CB2 receptor*. Retrieved from <https://hdl.handle.net/1887/4082998>

Version: Publisher's Version

[Licence agreement concerning inclusion of doctoral thesis in the Institutional Repository of the University of Leiden](#)

License: <https://hdl.handle.net/1887/4082998>

Note: To cite this publication please use the final published version (if applicable).

List of abbreviations

2-AG	2-arachidonoylglycerol	CINV	Chemotherapy-induced nausea and vomiting
A _{2A} R	Adenosine A _{2A} receptor	cLogP	Octanol-water partition coefficient
AC	Adenylate cyclase	Cluc	Cypridina luciferase
AD	Alzheimer's disease	CNS	Central nervous system
ADGRG1	Adhesion G protein-coupled receptor G1	COPD	Chronic obstructive pulmonary disease
ADME	Absorption, distribution, metabolism and excretion	CREA	Creatinine
AEA	N-arachidonylethanolamide, anandamide	cryo-EM	Cryo-electron microscopy
Aha1	ATPase homologue 1	C-term	C-terminus
ALS	Amyotrophic lateral sclerosis	CysLTR2	Cysteinyl leukotriene receptor 2
ANOVA	Analysis of variance	DAGL	Diacylglycerol lipase
ATP	Adenosine triphosphate	Δ ⁹ -THC	Delta-9-tetrahydrocannabinol
AUC	Area under the curve	dpm	Disintegrations per minute
BAM	Biased allosteric modulator	DTT	DL-dithiothreitol
BCA	Bicinchoninic acid	EA	Enzyme acceptor
β ₂ AR	β ₂ -adrenoceptor	ebBRET	Enhanced bystander BRET
B _{max}	Receptor expression level	EC ₅₀	Functional potency
BRET	Bioluminescence resonance energy transfer	eCBs	Endocannabinoids
BUN	Blood urea nitrogen	ECL	Extracellular loops
cAMP	Cyclic adenosine monophosphate	ECS	Endocannabinoid system
CaR	Calcium-sensing receptor	ELISA	Enzyme-linked immunosorbent assay
CB ₁ R	Cannabinoid CB ₁ receptor	E _{max}	Efficacy
CB ₂ R	Cannabinoid CB ₂ receptor	ERK1/2	Extracellular signal-related kinase 1 and 2
CBD	Cannabidiol	ET	Engagement time
CBD-DMH	Cannabidiol-dimethylheptyl	EYFP	Enhanced yellow fluorescent protein
CBGluc	Click beetle green luciferase	f.c.	Final concentration
CBluc	Click beetle luciferase	FAAH	Fatty-acid amide hydrolases
CBN	Cannabinol	FCS	Fetal calf serum
CBR	Cannabinoid receptor	FDA	Food and Drug Administration
CBRluc	Click beetle red luciferase	Fluc	Firefly luciferase
CCR2	CC chemokine receptor 2		
CHO	Chinese hamster ovary		

List of abbreviations

FSK	Forskolin	MAPK	Mitogen-activated protein kinase
GDC	Genomic Data Commons	MS	Multiple sclerosis
GDP	Guanosine diphosphate	NAL	Neutral allosteric ligands
GFP	Green fluorescent protein	NAM	Negative allosteric modulator
GIRK	G protein-coupled Inward Rectifying K ⁺ -channel	NanoBiT	NanoLuc Binary Technology
Gluc	Gaussia luciferase	NAPE-PLD	N-acylphosphatidylethanolamine-specific phospholipase D
GPCR	G protein-coupled receptor	NFAT	Nuclear factor of activated T cells
GRK	G protein-coupled receptor kinase	NLuc	NanoLuc luciferase
GTP	Guanosine triphosphate.	NSB	Non-specific binding
HBSS	Hank's Balanced Salt Solution	N-term	N-terminus
HEK293T	Human embryonic kidney 293 T	NTSR1	Neurotensin receptor 1
HER2	Human epidermal growth factor 2	PAM	Positive allosteric modulator
hiPSC	Human induced pluripotent stem cells	PAMPA	Passive membrane permeability assay
Hsp90	Heat shock protein 90	PAS	Periodic Acid-Schiff
IBMX	3-isobutyl-1-methylxanthine	PBS	Phosphate buffered saline
IBS	Inflammatory bowel disease	PD	Parkinsons's disease
IC ₅₀	Half-maximal inhibitory concentration	PDB	Protein Data Bank
ICL	Intracellular loops	PDE	Phosphodiesterase
IR ₅₀	Kinetic potency	PK	Prolink
IR _{max}	Kinetic efficacy	PMSF	Phenylmethylsulfonyl fluoride
K _D	Kinetic affinity	PTM	Post-translational modification
K _i	Inhibition constant	PTX	Pertussis Toxin
KO	Knockout	Rab	Rab-GTPase
k _{obs}	Observed association rate constant	Rluc	Renilla luciferase
k _{off}	Dissociation rate constant	RMSD	Root mean square deviation
k _{on}	Association rate constant	RT	Residence time
LgBiT	Large BiT	rt	Room temperature
LIMBA	Lipid Membrane Binding Assay	S1P ₁	Sphingosine-1-phosphate receptor 1
LogD	Octanol/water distribution coefficient	SD	Standard deviation
MAGL	Monoacylglycerol lipase	SEM	Standard error of the mean
		SmBiT	Small BiT
		SRF	Serum response factor
		TB	Total binding
		TBS	Tris-buffered saline
		TBST	Tris-buffered saline TWEEN 20

TM	Transmembrane
TMB	3,3',5,5'-Tetramethylbenzidine
UVM	Uveal melanoma
WT	Wild type
YFP	Yellow fluorescent protein

