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Towards peptide based therapeutics-applications in celiac disease and infectious diseases

Kapoerchan, V.V.

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Towards peptide-based therapeutics- Applications in celiac disease and infectious diseases

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Promotor : Prof. dr. F. Koning

Promotor : Prof. dr. H. S. Overkleeft

Co-promotor : Dr. ing. M. Overhand

Overige leden : Prof. dr. J. Brouwer

Dr. J.W. Drijfhout

Dr. G. M. Grotenbreg

Prof. dr. G. A. Van der Marel

Prof. dr. E. J. H. J. Wiertz

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Voor mijn ouders

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List of Abbreviations

4-DAPA	N α -Fmoc-N β -(4-N,N ² -dimethyl-aminophthalimidoyl)-L-diamino-propionic acid	EDC	1-(3-dimethylaminopropyl)-3-ethylcarbodiimide hydrochloride
6-DMNA	N α -Fmoc-N β -(6-N,N ² -dimethyl-aminonaphtalimidoyl)-L-diamino-propionic acid	EDTA	ethylenediaminetetraacetic acid
A	L-alanine	eq	equivalents
Å	Ångstrom	ESI	electrospray ionization
aa	amino acid	EtOAc	ethyl acetate
Ala	L-alanine	F	L-phenylalanine
APC	antigen presenting cell	Fmoc	9-fluorenylmethoxycarbonyl
Asp	L-aspartic acid	Fmoc-OSu	N-(9-fluorenylmethoxy-carbonyloxy)succinimide
Asn	L-asparagine	g	gram(s)
BAIB	iodobenzene diacetate	G	glycine
BHA	benzhydramine	GFD	gluten-free diet
Boc	<i>t</i> -butyloxycarbonyl	Gln	L-glutamine
BSA	bovine serum albumin	Glu	L-glutamic acid
Cbz	benzyloxycarbonyl	Gly	glycine
CD	celiac disease	GS	gramicidin S (Soviet)
CDI	1,1'-carbonyl diimidazole	GTP	guanidine triphosphate
Chg	cyclohexyl-L-glycine	h	hour(s)
Cha	cyclohexyl-L-alanine	HBTU	2-(1H-benzotriazole-1-yl)-1,1,3,3-tetramethylaminium hexafluorophosphate
C $_q$	quaternary carbon	HCTU	2-(6-chloro-1-H-benzotriazole-1-yl)-1,1,3,3-tetramethylaminium hexafluorophosphate
Cys	L-cysteine	HFiP	hexafluoroisopropanol
d	doublet	His	L-histidine
D	L-aspartic acid	HLA	human leukocyte antigen
DCM	dichloromethane	HMPB	4-(4-hydroxymethyl-3-methoxyphenoxy)butyric acid
dd	doublet of doublets	HOBt	N-hydroxybenzotriazole
ddd	doublet of doublet of doublets	HPLC	high performance liquid chromatography
DIAD	diisopropyl azodicarboxylate	HRMS	high resolution mass spectrometry
DIC	N,N'-diisopropylcarbodiimide	Hz	hertz
DIPEA	N,N'-diisopropylethylamine	I	L-isoleucine
DMAP	N,N'-dimethylaminopyridine	IC ₅₀	concentration at which 50% inhibition occurs
DMF	N,N-dimethylformamide		
DMSO	dimethyl sulfoxide		
DON	6-diazo-5-oxo-norleucine		
Dpr	L-2,3-diaminopropionic acid		
dt	double triplet		
E	L-glutamic acid		

IR	infrared spectroscopy	PIFA	bis(trifluoroacetoxy)-iodobenzene
<i>J</i>	coupling constant	PPII	polyproline type II
K	L-lysine	Pro	L-proline
kD	kilodalton	PyBOP	benzotriazol-1-yl-oxy-tris-pyrrolidinophosphonium hexafluorophosphate
L	L-leucine	Pyr	L-pyroglutamic acid
LC-MS	liquid chromatography mass spectrometry	q	quartet
Leu	L-leucine	Q	glutamine
Lys	L-lysine	R	L-arginine
m	multiplet	RCM	ring-closing metathesis
M	molar	RP	reversed phase
MAA	morpholine amino acid	S	L-serine
MBHA	4-methylbenzhydrylamine	s	singlet
Me	methyl	SAA	sugar amino acid
MeCN	acetonitrile	Ser	L-serine
MeOH	methanol	SPPS	solid phase peptide synthesis
MHC	major histocompatibility complex	t	triplet
MIC	minimal inhibitory concentration	TBAF	tetrabutylammonium fluoride
min	minute(s)	<i>t</i> Bu	<i>tert</i> -butyl
ml	milliliter(s)	TCR	T cell receptor
mM	millimolar	td	triple doublet
mmol	millimole(s)	TEMPO	2,2,6,6-tetramethylpiperidinoxy
MRSA	methicillin resistant <i>Staphylococcus Aureus</i>	TFA	trifluoroacetic acid
MS	mass spectrometry	TG2	tissue transglutaminase
μ M	micromolar	THF	tetrahydrofuran
m/z	mass over charge ratio	TIS	triisopropylsilane
NMR	nuclear magnetic resonance	TLC	thin layer chromatography
nM	nanomolar	Tmd	trifluoromethyldiazirine
NMM	N-methylmorpholine	TMS	trimethylsilyl
NMP	N-methyl-2-pyrrolidone	Trt	trityl
NOE	nuclear Overhauser effect	Ts	toluenesulfonyl
Orn	L-ornithine	<i>t</i> TG	tissue transglutaminase
P	L-proline	UV	ultraviolet
PBS	phosphate buffered saline	V	L-valine
PEP	prolyl endopeptidase	Val	L-valine
Phe	L-phenylalanine	W	L-tryptophan
		Y	L-tyrosine

