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Towards the development of synthetic vaccines against tuberculosis

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Towards the development of synthetic vaccines against tuberculosis

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*In memory of Aurelia Tripodo,
for her kindness and perseverance.*

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List of abbreviations

a.a.	amino acids
AIBN	2,2'-azobis(2-methylpropionitrile)
ANOVA	analysis of variance
APC	antigen-presenting cell
APT	attached proton test
aq	aqueous
arom	aromatic
BCG	bacillus Calmette–Guérin
BMM	bone-marrow derived macrophage
BnBr	benzyl bromide
BSA	bovine serum albumin
CCL*	chemokine ligand
CCR*	chemokine receptor
CD*	cluster of differentiation
CE	cyanoethyl
CFU	colony forming unit
CLEC4E	C-type lectin domain family 4 member E
CLR	C-type lectin receptor
COSY	correlation spectroscopy
CPG	controlled pore glass
CpG	cytosine-phosphorothioate-guanine oligodeoxynucleotides
CSO	(1 <i>S</i>)(+)-(10-camphorsulfonyl)oxaziridine
CTL	cytotoxic T lymphocytes
δ	chemical shift
d	doublet
DAMP	damage-associated molecular pattern
DC	dendritic cell

DC-SIGN	DC-specific ICAM-3 grabbing non-integrin
DCI	4,5-dicyanoimidazole
DCM	dichloromethane
DDA	dimethyldioctadecylammonium
DDQ	2,3-dichloro-5,6-dicyano-1,4-benzoquinone
DEAD	diethyl azodicarboxylate
DIC	diisopropylcarbodiimide
DIPA	diisopropylamine
DIPEA	<i>N,N</i> -diisopropylethylamine
DMAP	4-dimethylaminopyridine
DMEM	Dulbecco's modified Eagle medium
DMF	dimethylformamide
DMSO	dimethyl sulfoxide
DMT	(4,4'-dimethoxytrityl)
DNA	deoxyribonucleic acid
DOPC	1,2-dioleoyl- <i>sn</i> -glycero-3-phosphocholine
DOTAP	dioleoyl-trimethylammonium propane
DPAP	2,2-dimethoxy-2-phenylacetophenone
DTT	dithiothreitol
EDCI	1-ethyl-3-(3-dimethylaminopropyl)carbodiimide
EDTA	ethylenediamine tetraacetic acid
ELISA	enzyme-linked immunosorbent assay
eq	equivalents
ESI	electrospray ionization
et al.	<i>et alia</i> , 'and others'
EtOAc	ethyl acetate
FACS	fluorescence-activated cell sorting
FBS	fetal bovine serum
FCS	fetal calf serum
GM-CSF	granulocyte-macrophage colony-stimulating factor
GMM	glucose monomycolate
HEK	human embryonic kidney
HIV	human immunodeficiency virus
HLA	human leukocyte antigen

HMDS	hexamethyldisilazane
HPLC	high-performance liquid chromatography
HRMS	high resolution mass spectrometry
HRP	horseradish peroxidase
HSQC	heteronuclear single quantum coherence
IBX	2-iodoxybenzoic acid
IFN- γ	interferon γ
IL*	interleukin
IMDM	Iscoe's modified Dulbecco's medium
IR	infrared
ITAM	immunoreceptor tyrosine-based activation motif
J	J-coupling
KHMDS	potassium bis(trimethylsilyl)amide
KLRL1	killer cell lectin-like receptor subfamily G member 1
LAL	limulus amebocyte lysate
LC-MS	liquid chromatography mass spectrometry
LDA	lithium diisopropylamide
LN	lithium naphthalenide
LPS	lipopolysaccharides
m	multiplet
M-CSF	macrophage-colony stimulating factor
M1	macrophage type 1
M2	macrophage type 2
MACS	magnetic-activated cell sorting
MALDI-TOF	matrix-assisted laser desorption-ionisation-time of flight mass spectrometry
MAP*	mitogen-activated protein kinases
MCL	macrophage C-type lectin
mCPBA	<i>meta</i> -chloroperoxybenzoic acid
MFI	median fluorescence intensity
MHC	major hystocompatibility complex
Mincle	macrophage-inducible C-type lectin
MIP*	macrophage inflammatory protein
moDC	monocyte-derived dendritic cell
MPL	monophosphoryl lipid A

MPM	mannosyl phosphomycoketide
MR	mannose receptor
Mtb	<i>Mycobacterium tuberculosis</i>
MW	molecular weight
MyD88	myeloid differentiation primary response protein 88
NapBr	1-bromonaphthalene
NBS	<i>N</i> -bromosuccinimide
NLRP*	nucleotide-binding oligomerization domain
NMR	nuclear magnetic resonance
NOD*	nucleotide-binding and oligomerization domain
NOE	nuclear Overhauser effect
NOESY	nuclear Overhauser effect spectroscopy
NOS	nitrogen oxide species
OD	optical density
PAMP	pathogen-associated molecular pattern
PBMC	peripheral blood mononuclear cell
PBS	phosphate-buffered saline
PCR	polymerase chain reaction
PD-L*	programmed death ligand
PD*	programmed cell death protein
PDI	polydispersity index
Ph	phenyl
PM	phosphomycoketide
ppm	parts per million
PRR	pattern recognition receptor
<i>p</i> TsOH	<i>para</i> -toluenesulfonic acid
q	quartet
quant.	quantitative
RIG*	retinoic acid-inducible gene
RNA	ribonucleic acid
RPMI	Roswell Park Memorial Institute
RT	room temperature
s	singlet
s.c.	subcutaneous

SD	standard deviation
SEAP	secreted embryonic alkaline phosphatase
SEM	standard error of the mean
SLP	synthetic long peptide
SYK	spleen tyrosine kinase
t	triplet
TB	tuberculosis
TBAF	tetra- <i>n</i> -butylammonium fluoride
TBAI	tetra- <i>n</i> -butylammonium iodide
TCEP	(tris(2-carboxyethyl)phosphine)
TCR	T cell receptor
TDB	trehalose-6,6'-dibehenate
TDM	trehalose-6,6'-dimycolate
TDS	trehalose-6,6'-distearate
TDSCI	chloro(dimethyl)hexylsilane
TFA	trifluoroacetic acid
Th*	T helper cell
THF	tetrahydrofuran
TIRAP	TIR-containing adaptor protein
TIS	triisopropyl silane
TLC	thin-layer chromatography
TLR*	toll-like receptor
TMB	3,3',5,5'-Tetramethylbenzidine
TMS	trimethylsilyl
TNF- α	tumor necrosis factor α
TRIF	TIR-domain-containing adapter-inducing interferon- β
UV	ultraviolet
WHO	World Health Organization

NB: The asterisk symbol () used in the list of abbreviations is the wildcard character for any number which indicates a different member of the indicated family.*

