Bacterial glycomimetics: synthesis and applications

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PROEFSCHRIFT

ter verkrijging van
de graad van doctor aan de Universiteit Leiden,
op gezag van rector magnificus prof.dr.ir. H. Bijl,
volgens besluit van het college voor promoties
te verdedigen op donderdag 19 oktober 2023
klokke 10:00 uur

door

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geboren te Genova, Italy
in 1991

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List of abbreviations

Å	angstrom
Ac	acetyl
AGA	automated glycan assembly
avDPX of X	average degree of polymerization
Bn	benzyl
BSA	bovine serum albumin
Bz	benzoyl
CAN	cerium ammonium nitrate
Cbz	benzyloxycarbonyl
CNE	2-cyanoethyl
CPG	controlled-pore glass
CPSs	capsular polysaccharides
CRM197	cross-reactive material 197
CSO	(10-camphorsulfonyl)oxaziridine
d	doublet
DBU	1,8-Diazabicyclo[5.4.0]undec-7-ene
DCA	dichloroacetic acid
DCI	4,5-dicyanoimidazole
DCM	dichloromethane
dd	doublet of doublets
DDQ	2,3-Dichloro-5,6-dicyano-1,4-benzoquinone
DIC	N,N'-Diisopropylcarbodiimide
DIPEA	N,N-diisopropylethylamine
DMAP	4-dimethylaminopyridine
DMF	dimethylformamide
DMTr	4,4'-dimethoxytrityl
DNA	2-deoxyribonucleic acid
DPX	degree of polymerization of X
DT	diphtheria toxoid
dt	doublet of triplets
EDTA	ethylenediaminetetraacetic acid
ELISA assay	enzyme-linked immunosorbent
EPSs	exopolysaccharides
Et	ethyl
Fmoc	fluorenylmethyloxycarbonyl
Gal	galactose
GalNAc	N-acetylgalactosamine
GBS	group-B streptococci
Glc	glucose
GNPs	gold nanoparticles
GroP	glycerol phosphate
Hib H.	influenzae type b
HPLC	high-performance liquid chromatography
HRMS	high-resolution mass spectrometry
Hz	herz
i	iso
IgG	immunoglobulin isotype G
IgM	immunoglobulin isotype M
IR	infrared
J	coupling constant
kDa	kilodalton
Lev	levulinoyl

LPS lipopolysaccharide

LPSs lipopolysaccharides

LTA lipoteichoic acid

m multiplet

m/z mass over charge ratio

MALDI matrix-assisted laser desorption ionisation

m-CPBA meta-chloroperbenzoic acid

Me methyl

MenA Neisseria meningitidis serotype A

Nap naphthylmethyl

NIS N-iodosuccinimide

NMI N-methylimidazole

NMR nuclear magnetic resonance

OMPC outer membrane protein complex of serogroup B meningococcus

OPA opsonophagocytic killing assay

OPIA opsonophagocytic killing inhibition assay

PADRE Pan HLA-DR Epitope

PAMP pathogen-associated molecular pattern

PBS phosphate-buffered saline

PD Haemophilus protein D

PLD pneumolysoid

PMB 4-methoxybenzyl

PNAG non-acetylated poly-N-acetyl-D-glucosamine

Pr propyl

PRP β-D-ribose-D-ribitol-5-phosphate

pTsOH 4-toluenesulfonic acid

PyBOP (benzotriazol-1-yl-oxy)tripyrrolidino

q quartet

RCT Randomized controlled trials

RNA ribonucleic acid

s singlet

sn stereospecific numbering

SPIONs SuperParamagnetic Iron Oxide Nanoparticles

SPR surface plasmon resonance

ST8 serotype 8

t triplet

TAs teichoic acids

TBAF tetra-butylammonium fluoride

TBDPS tert-butyl-di-phenyl-silyl

TBS tert-butyl-di-methyl-silyl

TCA trichloroacetic acid

TDS thexyldimethyl-silyl

TES triethylsilane

Tf triflate

THF tetrahydrofuran

THP tetrahydropyranyl

TLC thin-layer chromatography

TMS tetramethylsilane

TT Tetanus Toxoid

tt triplet of triplets

UDP uridine diphosphate

VRE vancomycin-resistant enterococci

WTA wall teichoic acid

δ chemical shift