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Synthetic strategies for non-hydrolyzable pyrophosphate analogues

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Synthetic strategies for non-hydrolyzable pyrophosphate analogues

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List of abbreviations

A4GALT	alpha 1,4-Galactosyltransferase	DIPEA	<i>N,N</i> -di-iso-propylethylamine
Ac	acetyl	DMAP	<i>N,N</i> -4-dimethylaminopyridine
ADP	adenosine diphosphate	DMF	dimethylformamide
ADPr	adenosine diphosphate ribose	DMP	Dess-Martin periodinane
ATP	adenosine triphosphate	DNA	deoxyribonucleic acid
aq.	aqueous	Et	ethyl
Boc	<i>t</i> -butyloxy carbonyl	EtOAc	ethyl acetate
BPs	bisphosphonates	eq	equivalents
bs	broad singlet	ESI	electrospray ionization
<i>t</i> -Bu	<i>tert</i> -butyl	et al.	et alii (and others)
Bz	benzoyl	FAD	flavin adenine dinucleotide
CDP	cytidine diphosphate	FDA	Food and Drug Administration
COSY	correlation spectroscopy	h	hour
δ	chemical shift	HPLC	high performance liquid chromatography
CSI	chlorosulfonyl <i>iso</i> -cyanate	HRMS	high-resolution mass spectroscopy
d	doublet	HSQC	heteronuclear single quantum coherence
DBU	1,8-diazabicyclo(5.4.0)undec-7-ene	IMPDH	inosine monophosphate dehydrogenase
DCC	<i>N,N</i> -dicyclohexylcarbodiimide	Hz	Hertz
DCI	4,5-dicyanoimidazole	GAL	Galactosidase
DCM	dichloromethane	GlcNAc	<i>N</i> -acetylglucosamine
dCPI	dichlorophosphoryl <i>iso</i> -cyanate	GroP	glycerol 3-phosphate
dd	doublet of doublets	GT	Glycosyltransferase
DIAD	diisopropyl azodicarboxylate	IC ₅₀	half maximal inhibitory concentration
DIC	<i>N,N'</i> -diisopropylcarbodiimide	<i>i</i> Pr	<i>iso</i> -propyl
<i>J</i>	coupling constant	RboP	ribitol 5-phosphate
LCMS	liquid chromatography mass spectrometry	R _f	retention factor

LTA	lipoteichoic acid	RP	reversed phase
m	multiplet	rt	room temperature
M	molar	s	singlet
m/z	mass to charge ratio	sat	saturated
MALDI	matrix-associated laser desorption ionization	sn	stereospecific numbering
<i>m</i> CPBA	<i>meta</i> -chloroperoxybenzoic acid	t	triplet
Me	methyl	TAs	Teichoic acids
min	minute	Tag	teichoic acid glycerol
MNST	1-(mesitylene-2-sulfonyl)-3-nitro-1,2,4-triazole	Tar	teichoic acid ribitol
MRSA	Methicillin-resistant <i>Staphylococcus aureus</i>	TIPS	Triisopropylsilyl
Ms	mesyl	<i>t</i> Bu	<i>tert</i> -butyl
MS	mass spectrometry	TBAI	<i>tetra-n</i> -butylammonium iodide
MS	molecular sieves	TBDPS	<i>tert</i> -butyldiphenylsilyl
NAD ⁺	nicotinamide dinucleotide	TBS	<i>tert</i> -butyldimethylsilyl
NDP	nucleoside diphosphate	TES	triethylsilyl
NMR	nuclear magnetic resonance	Tf	triflyl
Nu	nucleophile	TFA	trifluoroacetic acid
NR	no reaction	Tf ₂ O	trifluoromethanesulfonic anhydride
Ph	phenyl	TLC	chromatography thin-layer
PMB	<i>para</i> -methoxybenzyl	THF	tetrahydrofuran
POM	pivaloyloxymethyl	TMS	trimethylsilyl
PTM	post-translational modification	Trt	triphenylmethane
PyNTP	3-nitro-1,2,4-triazol-1-yl-tris(pyrrolidin-1-yl)phosphonium hexafluorophosphate	Ts	Tosyl
		TsOH	(<i>p</i>)-toluenesulfonic acid uridine
		UDP	diphosphate
		UV	ultraviolet
		WTA	wall teichoic acid

