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## Synthesis and application of glycans unique to *S. mansoni*

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# Synthesis and application of glycans unique to *S. Mansoni*

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*This is 10% luck, 20% skill,  
15% concentrated power of will.  
5% pleasure and 50% pain*

-Fort Minor-



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## List of abbreviations

Ac	acetyl
ACN	acetonitrile
All	allyl
APT	attached proton test
aq.	aqueous
arom.	aromatic
AuNP	gold nanoparticle
BAIB	bis(acetoxy)iodobenzene
Bn	benzyl
BSA	bovine serum albumin
Bz	benzoyl
cat.	catalyst
CAA	circulating anodic antigen
CCA	circulating cathodic antigen
Cbz	benzyloxycarbamate
ClAc	2-chloroacetyl
C <sub>q</sub>	quaternary carbon
CSA	camphorsulphonic acid
δ	chemical shift
d	doublet
DBU	1,8-diazabicyclo-[5.4.0]-undec-7-ene
DCE	1,2-dichloroethane
DCM	dichloromethane
DDQ	2,3-dichloro-5,6-dicyano-benzoquinone
DFT	density functional theory
DMAP	4-(N,N-dimethylamino) pyridine
DMF	N,N-dimethylformamide
DMP	2,2 dimethoxypropane
DMTST	dimethyl(methylthio) sulfonium triflate
DPS	diphenyl sulfoxide
DTBMP	2,6-di- <i>tert</i> -butyl-4-methylpyridine
DTBS	di- <i>tert</i> -butylsilyl
ELISA	enzyme-linked immunosorbent assay
eq.	equivalent(s)
ESI	electrospray ionization
Et	ethyl
<i>et al.</i>	<i>et alia</i> 'and others'
Fuc	L-fucose



Fmoc	(9 <i>H</i> -fluoren-9-yl) methoxycarbonyl
GalNAc	D-N-acetyl galactosamine
GlcA	D-glucuronic acid
GlcNAc	D-N-acetyl glucosamine
h	hour(s)
HFIP	1,1,1,3,3,3-hexafluoro- <i>iso</i> -propanol
HMBC	heteronuclear multiple bond correlation
HRMS	high resolution mass spectroscopy
HRP	horseradish peroxidase
<i>J</i>	<i>J</i> -coupling
KK	Kato-Katz
LC-MS	liquid chromatography mass spectrometry
LDN	GalNAc-β-(1-4)-GlcNAc
Lev	levulinoyl
m	multiplet
M	molar
mAb	monoclonal antibody
MBz	4-methylbenzoyl
Me	methyl
MS	molecular sieves
Nap	2-methylnaphthyl
NBS	N-bromosuccinimide
NIS	N-iodosuccinimide
NMR	nuclear magnetic resonance
OD	optical density
OTf	triflate
PDC	pyridinium dichromate
PE	petroleum ether
PG	Protective group
Ph	phenyl
Phth	phthalimide
ppm	parts per million
<i>p</i> -TSOH	<i>para</i> -toluenesulphonic acid
PZQ	Praziquantel
q	quartet
quant.	quantitative
RAM/PO	Rabbit Anti-Mouse IgG Peroxidase Conjugated
RFU	relative fluorescence units
RRV	relative reactivity value
RT	room temperature
s	singlet
S.	Schistosoma

SE	2-silanoethyl
sat.	saturated
t	triplet
TBAA	tetrabutylammonium acetate
TBABr	tetrabutylammonium bromide
TBAF	tetrabutylammonium fluoride
<i>t</i> -Bu	<i>tert</i> -butyl
TBDMS	<i>tert</i> -butyldimethylsilyl
TCA	2,2,2-trichloro acetyl
TCE	2,2,2-trichloroethyl
TEMPO	2,2,6,6-tetramethylpiperidinyloxy
TES	triethylsilane
TFA	trifluoro acetic acid
THF	tetrahydrofuran
TLC	thin layer chromatography
TMB	3,3',5,5'-tetramethylbenzidine
TMS	trimethylsilyl
Tol	toluene
Troc	trichloroethyl carbamate
TTBP	2,4,6-tri- <i>tert</i> -butylpyrimidine
UV	ultraviolet
WHO	World Health Organization